
FINAL REPORT OF THE FOURTH
REGULAR SETTLEMENT OF THE
GUJRAT DISTRICT, 1912—16.



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FINAL REPORT

OF THE

FOURTH REGULAR SETTLEMENT

OF THE

GUJRAT DISTRICT

1912—1916.

BY
H. S. WILLIAMSON, I.C.S.
SETTLEMENT OFFICER.



Lahore:
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1916.

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From

THE HON'BLE MR. H. D. CRAIK, I.C.S.,
Revenue Secretary to Government, Punjab,

To

THE SENIOR SECRETARY TO THE FINANCIAL COMMISSIONERS, PUNJAB.

Dated Simla, the 10th September 1917.

Revenue and Agriculture.

Revenue.

SIR,

I AM directed to refer to your letter No. 91-750-1, dated the 6th March 1917 forwarding Mr. Williamson's final report of the settlement of the Gujrat district together with the Commissioner's and Financial Commissioner's reviews.

2. The assessment imposed by Colonel Davies between 1891 and 1893 was admittedly a light one, no attempt being made to approach the full theoretical standard. As compared with the previous Settlement of 1868—which the Government of India at the time criticised as unduly low and reluctantly confirmed—there had been an increase of 27 per cent. in cultivation and of 25 to 30 per cent. in prices. Colonel Davies raised the old demand by 36 per cent. and his assessment was estimated to represent 71 per cent. of the half net assets as calculated by him. Though elasticity in collection was necessitated by successive seasons of famine and scarcity in parts of the district, the settlement worked well on the whole. Since 1893 there has been a small extension of cultivation and a substantial increase in the number of wells and consequently in the average sown area, while the price of agricultural produce has risen by about 55 per cent. and the selling value of land has almost trebled. Colonel Davies' settlement expired in Gujrat in 1911, and in Kharian and Phalia in 1912, and the circumstances summarised above furnish ample justification for enhancement of the demand on existing cultivation. At the same time the western half of the district in which agriculture has hitherto been precarious and backward is now on the eve of a great agricultural revolution owing to the construction by Government of the Upper Jhelum canal, and that fact rendered it necessary to settle in advance the principles on which future irrigation was to be assessed.

3. The actual demand now imposed in the nine circles where canal irrigation will play little or no part and where in consequence a fixed assessment has been retained amounts to Rs. 8,54,188 or an enhancement of nearly 26 per cent. on the former demand. This is considerably less than one half of the full revenue to which Government is in theory entitled from these circles, while of the total enhancement of Rs. 1,76,000, Rs. 56,000 will not be collected for the first five years or more, owing to the system of progressive enhancements and protective leases on new wells. No estimate has been made in the report of the revenue from the three circles where, to meet the changing conditions that canal irrigation will introduce, the assessment will be wholly or mainly fluctuating. But on the assumption that the Commissioner is correct in forecasting an additional enhancement of Rs. 6,00,000 per annum when irrigation from the Upper Jhelum Canal is fully developed, the total taxation on the agriculture of the district will still fall

substantially short of the sum of nearly Rs. 23½ lakhs which the Financial Commissioner estimates as the full theoretical demand on existing cultivation alone. It is thus clear that the present assessment is at least as lenient as that which preceded it and that in those parts of the district where a great expansion of cultivation with the aid of canal water may be expected in the immediate future, the fluctuating rates now sanctioned for matured crops should in the interests of the general tax-payer be revised as soon as the conditions of irrigation have become reasonably stable. Irrigation actually commenced in the summer of 1916.

4. The new assessments were generally well received but the Settlement Officer's remark that they are considered lenient, though no doubt correct, would have carried more weight if he had given the usual statistics of objections and appeals from the various tahsils. The distribution of the demand between villages and over holdings appears to have been carefully and equitably carried out.

5. Mr. Williamson has devoted a large portion of his report to a discussion of the revision of the record of rights, and has eloquently described the grave inconvenience and difficulty caused by the unfortunate experiment—tried before he took charge of the operations—which aimed at producing, on a system now definitely abandoned as impracticable and by the agency of an inadequate and apparently incompetent staff, an accurate map and record. Much time and trouble would have been saved had the work proceeded from the start on the usual lines, and it is in His Honour's opinion creditable to Mr. Williamson and his assistants that, in spite of difficulties caused by mistakes for which he was not responsible, they succeeded in producing a record accepted by the Financial Commissioner as satisfactory for practical purposes. Colonel Popham Young in commenting on this aspect of the settlement draws the inference that if a more or less complete revision of the record and a special calculation of assessment data is necessary at each re-settlement, we must admit that our recording agency is failing adequately to discharge its functions. But the Lieutenant-Governor agrees with Mr. Fagan that this is much too pessimistic a conclusion. His Honour believes that the agency is steadily if slowly improving in efficiency, and that it fulfils many useful and indeed indispensable functions in the intervals between re-assessment. But only an idealist can look forward to the time when periodical scrutiny by an expert staff can safely be dispensed with, while it is at least doubtful if the average revenue payer would prefer an automatic and summary enhancement of his assessment to the present methods.

6. The question of the term of settlement is one of some difficulty, as regards those parts not commanded by the Upper Jhelum canal. For villages that already receive or will receive irrigation within the next 10 years the Lieutenant-Governor agrees with the Financial Commissioner (paragraph 12 of his review) that the term should be fixed at 10 years. With the great expansion of cultivation that is bound to come, there will be an influx of new tenants, many of them probably more skilful and enterprising than the existing proprietors and some of them holding leases on favourable terms from Government. Communications and markets will doubtless improve and economic conditions generally will undergo a radical change. In the unirrigable parts of the district, on the other hand, the limit of cultivation has practically been reached, rents are fair and conditions are not likely to change materially. The district has made and is making a splendid response to the call for recruits for the combatant ranks and for followers' corps and stands fourth of the districts of the province in the contribution of men it has made to meet the needs of the Empire. The Lieutenant-Governor has never disguised his view that the lenient standard of assessment in the Punjab as compared with other provinces is justified by two facts, viz., that the Punjab zamindars are as a rule small self-cultivating peasant proprietors and that they form the backbone of the Indian army. The agricultural tribes of Gujrat, especially in the areas that will not benefit by the canal, admirably fulfil those two conditions and in recognition thereof the new demand has been pitched low. Though no expectation of a

longer term than 20 years has been raised, the Lieutenant-Governor has further decided that no enhancement of the fixed demand shall be made for 30 years in villages that do not either now or in the future receive canal irrigation. But as the Financial Commissioner has pointed out, while in canal irrigated villages cultivation, fertility and wealth are bound to increase, deterioration in the riverain tracts not likely to receive canal water is possible. Tenants may consequently be attracted to the virgin soil and easier agricultural conditions of the uplands and cultivation in the riverain and even in the uncommanded villages of the uplands may contract. For these reasons it is advisable to provide that 20 years hence an enquiry should be made with a view to ascertaining whether in any villages unirrigated by the canal a reduction of the demand would be justified.

7. Settlement operations lasted a little over $3\frac{1}{2}$ years and cost approximately Rs. 3,07,400. The Lieutenant-Governor agrees with the Financial Commissioner that Mr. Williamson deserves credit for the expeditious completion of his task in circumstances of no small difficulty and complexity, and with results satisfactory both to Government and to the people.

The preparation of a revised edition of the Gazetteer has been held over and the Lieutenant-Governor would be glad to have the opinion of the Financial Commissioner whether that should be undertaken now or deferred till the new conditions of canal irrigation are more fully developed.

The Financial Commissioner's review is, as usual, admirable and has been of great assistance to Government.

I have, &c.,

H. D. CRAIK,

Revenue Secretary to Government, Punjab.



No. 91—750-1.

FINANCIAL COMMISSIONERS' OFFICE :

Lahore; dated 6th March 1917.

FROM

V. CONNOLLY, ESQUIRE, I.C.S.,

Senior Secretary to the Financial Commissioners,

Punjab,

TO

THE HON'BLE MR. H. D. CRAIK, I.C.S.,

Revenue Secretary to Government, Punjab.

The Hon'ble Mr. P. J. Fagan, I.C.S.

SIR,

I AM directed to forward Mr. Williamson's report of the fourth regular settlement of the Gujrat District, together with the Commissioner's review, and to submit the following remarks of the Financial Commissioner.

2. The general characteristics of the district have been epitomized by the Commissioner with his usual graphic incisiveness in paragraphs 1 and 2 of his review. It lies between the Jhelum river on the north and the Chenab on the south and may be divided with rough accuracy into a submontane tract to the north-east, including almost the whole of Gujrat and Kharian tahsils, and a true plains tract to the south-west of which the Phalia tahsil forms the greater part. The former tract, of which the chief physical features are the Pabbi hills and the torrents which include the Bhimbar draining into the Chenab, enjoys an ample and regular rainfall with an annual average of from 26 to 30 inches. Agriculture is reasonably secure and comparatively small use is made of wells. In the latter tract the rainfall, normally about 20 inches per annum, is much more capricious. Barani cropping is liable to serious contractions in dry years, wells are of importance, and in Phalia tahsil 35 per cent. of the sowings are made with well water as compared with 3½ per cent. in Kharian. On the Jammu border and on the Pabbi hills there is some stony or sandy land but generally soils throughout the district are good and fertile. Cultivation in the submontane tract has already in the Settlement Officer's opinion reached the limit of expansion but the Commissioner considers that there is still room for some slight development in this respect. In the western portion little more than half the total area is under the plough and it is to this tract that irrigation from the Upper Jhelum Canal which runs across the district will be extended. Normally 11 per cent. of the sowings fail but on each 100 acres of cultivated land 91 acres of crops are harvested. The composition of the cropping is of a moderate standard. Wheat and bajra are the main crops but in Phalia some maize, cotton, and cane are raised on well lands. Generally, however, the wells are devoted mainly to the cultivation of wheat and of fodder in rabi. The people among whom Jats and Gujars form the chief tribes are almost entirely

Muhammadans and are fairly efficient as cultivators and on the whole moderately prosperous. Holdings from tahsil to tahsil average from 5 to 7 acres and are small, but the proprietary body is not unduly embarrassed. Mortgagees among whom non-agriculturists are slightly the more numerous hold $13\frac{1}{2}$ per cent. of the cultivated area. The excess over the provincial average of $11\frac{1}{2}$ per cent. is small. Land sells for Rs. 207 and Rs. 188 per acre cultivated in the two eastern tahsils, Kharian and Gujrat, respectively, but in Phalia the sale price is only Rs. 79. The average consideration for existing mortgage is Rs. 97 per acre in the first two tahsils and Rs. 35 in the third, but this is of course not a fair index of the present mortgage value of land. Generally the district being devoted mainly to barani cropping by a not too skilful body of cultivators is somewhat below the provincial average of fertility and wealth but the standard of agriculture and of prosperity is not unduly low.

3. Since the resources of the district were last reviewed nearly 25 years ago by Colonel Davies the development of agriculture has not been great. The cultivated area has increased by a little over 9,000 acres, or about 1 per cent. The increase has occurred chiefly in the Bar and the Hithar of Phalia. The submontane tract has practically the same cultivated area as before. Wells have increased by about a thousand, while the normal sown area has risen from 864,251 to 886,443 acres, or by $2\frac{1}{2}$ per cent. only. On the other hand the value of land and of agricultural produce is enormously higher than it was at last settlement. Cultivated land is shown by sale prices to have risen in value 131 per cent. in Gujrat, 125 per cent. in Kharian, and 152 per cent. in Phalia. The Settlement Officer considers that the appreciation of value of agricultural produce has been at least between 51 and 58 per cent., but this calculation rests on a comparison of the scales of commutation prices assumed by Colonel Davies and Mr. Williamson, respectively. Under the Financial Commissioner's orders a comparison between actuals and actuals was made based on the average gazette prices for the ten years ending with the rabi of 1913 and those for the ten years preceding the introduction of Colonel Davies' assessment. The result showed that produce sent to market fetches now at least 55 per cent. more than it did twenty-five years ago. If, however, during the recent past the extension of agriculture has been slow the western portion of the district is now on the eve of a great development. The Upper Jhelum Canal runs completely across the district through the south of the Kharian and the west of the Gujrat tahsils and will irrigate freely on its right bank. Irrigation in the uplands will be perennial but in the Chenab Hithar lands it will be given in kharif only with preliminary rabi waterings. The intensity of the irrigation of each kind will be differentiated according to the natural conditions of each tract. Perennial irrigation in Kharian and in the small portion of Gujrat which is to receive it will be given for 50 per cent. of the commanded culturable area but in Phalia for 80 per cent. Kharif channels in Gujrat are designed for 25 per cent. of the commanded area and in Phalia for 25 per cent. or 30 per cent. These facilities will lead to a large increase in the cultivated area and to an improvement in cropping, especially in the Bar of Phalia, where the soil is particularly well suited to irrigated cultivation.

4. The fiscal history of the district under British rule has been generally speaking a record of lenient assessments accompanied in the earlier settlements by a steady increase of the cultivated area. At last settlement no attempt was made to reach the pitch of a full theoretical demand and Colonel Davies' assessment was accordingly light. The seasons of famine and scarcity which have marked its currency have tried it severely but with the aid of elasticity in collections it has worked well. Remissions of demand have amounted to only 0.65 per cent. of the total revenue in Gujrat, 1.8 per cent. in Kharian, and 4.2 per cent. in Phalia, and difficulty has been experienced only in those portions of the district to which canal irrigation will now be extended. On the extreme west of the district, however, in the small riverain tract which was recently transferred to Phalia from Shahpur the fixed assessment of last settlement broke down owing to river changes and calamities of season.

5. In providing for the assessment of future irrigation it was of course impossible to base the settlement on the usual calculation of proprietary profits. For the existing cultivation, however, the ordinary estimate of assets has been made. Cash rents are practically unknown and the Settlement Officer has, therefore, been confined to the estimate based on produce. The fundamental data adopted for this purpose, average mature crop areas, rates of yield and prices, while not erring in the direction of lenience, were fair and moderate. Liberal deductions were made on account of menials' dues while the kind rent rates varying from 33 per cent. to 50 per cent. are probably not severe as indices of the average surplus after deduction of the expenses of cultivation. The final estimate of Rs. 23,36,679 is on the whole a fair representation of the full theoretical demand of Government from existing cultivation. It falls at Rs. 2-11-8 per acre cultivated, and at Rs. 2-15-9 per acre of matured crops. The above figures are not given in the report under review; they have been obtained from those furnished in paragraph 48, supplemented by others taken from the assessment reports of Kharian and Phalia.

6. In paragraph 12 of the orders of Government on the assessment report of the Phalia tahsil the necessity for explaining lucidly in the final report the complicated scheme of assessment which has been adopted was pointed out and it was suggested that an illustrative map should be prepared. Unfortunately the Settlement Officer has not complied with these instructions, while the disjointed references to the subject in various paragraphs of Chapter IV of the report scarcely serve the purposes of lucid explanation. With the assistance of the Deputy Commissioner however a somewhat detailed note explanatory of the various forms of assessment which have been applied to various portions of the district and of their local extent has been prepared with illustrative tahsil maps. Copies of the latter and of the note are appended to this review and the Financial Commissioner trusts that with the additional observations made below they will be found to serve the purpose in view. In the previous settlement now expired the assessment of the district was wholly fixed. In its main lines the scheme of assessment which has now been adopted is fairly simple. There are three forms or systems:—

- (1) entirely fixed of the ordinary type; ;
- (2) a fixed assessment with the addition of a fluctuating water advantage rate per acre matured of nahri crops; and
- (3) a fully fluctuating assessment to be framed by the application of classified crop rates to matured areas.

Complexity is mainly due to the intermingling of the three forms in their local application, this itself being largely the almost unavoidable result of the rather peculiar circumstance that the introduction of canal irrigation has been simultaneous with that of a new settlement. Complexity has been further increased by the recasting of circles in Phalia after completion of assessment. It will thus be plain that no very lucid explanation in a succinct form is possible. Neglecting more or less limited local exceptions, which are detailed in the appended note, it may be said broadly that (i) the Gujrat tahsil is under fixed assessment except for a fluctuating water advantage rate on mature canal irrigated crops; (ii) the Kharian tahsil is under fixed assessment except the Gojar circle in the south-west corner in which for the most part the assessment is wholly fluctuating; and (iii) in Phalia the whole of the central or Bar tract has been given full fluctuation except for a certain amount of patchy commingling of systems on its edge; the western portion of the Chenab riverain (Hithar) is also under a fully fluctuating assessment; the remainder of the tahsil is under fixed assessment with fluctuating water advantage rate for canal irrigation.

7. The report affords no means of calculating what proportion of the total half net assets the new assessment on existing cultivation will absorb because it is not possible to state what proportion of the area hitherto cropped or cultivated

has been placed under fluctuating assessment nor is it possible to estimate what the future total average annual amount of the latter assessment will be. In paragraph 48, however, Mr. Williamson has given statistics for circles to which fixed assessments have been applied. These, excluding Phalia Hithar East for which, owing to post-assessment disruption of circles no half net asset estimate can now be stated, show that the previous demand of Rs. 5,55,536 has been enhanced by 27 per cent. to Rs. 7,07,000, absorbing 43 per cent. of the corresponding half net asset. The Settlement Officer has also discussed the assessment of each circle in separate paragraphs which make clear the general moderation of the new demand. The pitch of the rates on matured areas for the purpose of the fluctuating assessment has been arrived at with reference partly to the rates already adopted on the Upper Chenab Canal in Gujranwala and partly to crop rates framed so as to bring out the fixed assessment imposed in the other portions of the district. The various canal water advantage and fluctuating rates are detailed in the explanatory note appended to this review. The new assessment appears to the Financial Commissioner to be one characterized by the fullest degree of moderation and to be one which can be met by the revenue payees without any economic difficulty. The financial results both as regards fixed and probable future fluctuating demand have been summarized in paragraphs 6 and 7 of the Commissioner's review.

8. In paragraph 64 of his report the Settlement Officer deals with the distribution of the fixed assessment over estates. He has not reproduced, as paragraph 550 of the Settlement Manual requires, the substance of the notes submitted with the detailed village assessment statements, but Sir Alexander Diack in his orders on the Kharian report testified to the thoroughness of Mr. Williamson's village-to-village assessments and Mr. Fagan has no doubt that this part of the work has been carefully done. In introducing the fluctuating assessment the Settlement Officer has differentiated the circle rates to the extent which appeared necessary and possible. Accurate differentiation of the nahri rates can, as he remarks, be done only when irrigation has been introduced. In the Gojar the circle rates have been applied to most villages and in the Bar differentiation has practically been confined to the nahri rate in a few villages. But in the Hithar West circle discrimination between villages has been made more freely. The assessment has been well received.

9. The vitally important matter of the bach or internal distribution of the fixed assessments over holdings has evidently received careful attention with a view to securing equitable results in reference to distinctions in quality of individual wells and of classes of soil.

10. In Chapter III of the report Mr. Williamson has dealt at great length with the revision of the land records. The Financial Commissioner has already, in paragraphs 10 and 13 of this office letter No. 91-745-1, dated 18th September 1916, containing his remarks on the settlement of the Lahore District, expressed his opinion regarding the abbreviated system of map correction and the revision of the record prior to the arrival of the officer charged with the task of revising the assessment. This system which on its merits has been rightly abandoned was tried in this district with much too small a staff. By dint of a good deal of checking and correction, and by making good previous defects after the arrival of the Settlement Officer, a jamabandi sufficiently satisfactory for bach purpose was obtained in the Gujrat tahsil and in a part of Kharian, while elsewhere the record prepared under the system has been superseded by later documents prepared by Mr. Williamson. The record operations undertaken by the Settlement Officer during the course of the settlement proper subsequently to the completion of the abbreviated map correction are described in Mr. Williamson's paragraph 23. Killabandi and the aid of the Survey Department have secured an accurate and easily maintained map in those parts of the district in which changes are most to be expected. Generally the record may be regarded as satisfactory for practical

purposes if it does not reach the high standard attained elsewhere, but it is at the same time clear that the ordinary system of map correction, prescribed in Appendix XXI, Settlement Manual, would have given better results with less waste of time and effort and with not much, if any, greater expenditure than the abbreviated system, the general unsuitability of which has now been fully established. The Commissioner appears to the Financial Commissioner to take, in the 5th paragraph of his review, a much too gloomy view of the efficiency of our district staff for the maintenance of land records and of the constant efforts which are being made to improve the machinery. In this case there is no reason to anticipate that, given proper supervision and control on the part of superior revenue officers, the staff will find it beyond its power to maintain a sufficiently accurate record both of rights and of agricultural statistics. It is not, in the Financial Commissioner's opinion, accurate to say that we maintain the machinery without securing an adequate product, though he fully admits that, in the absence of full technical knowledge and sufficient supervision on the part of revenue officers of all grades, the quality of the product must necessarily be inferior. Apart from this it would be more accurate to say that the most prominent feature of our recent land revenue record policy has been the increased attention paid to the continuous annual correction of field records and the Financial Commissioner does not contemplate that these efforts will fail to make the necessity for special revision less frequent than in the past. At the same time he does not anticipate that, however perfect our system of land records and agricultural statistics may become, it will ever be possible for settlement operations to assume as regards either assessment or records that automatic shape which the Commissioner appears to contemplate.

11. The miscellaneous matters dealt with at settlement have been of

Miscellaneous.

the usual nature. New assessment and procedure rules for Sailab lands have been sanctioned. They follow as closely as possible those already approved for the Sialkot district and are reproduced in Appendix II. In the latter have also been unnecessarily inserted certain *draft* rules, Part A, which were not approved. The Financial Commissioner is inclined to think that the classification of insecure villages in the scheme in Appendix III of the report is, perhaps, unnecessarily cautious. The arrangements for the collection of the demand are suitable. A graded system for the remuneration of zaildars has been introduced. Proposals have recently been accepted by Government which will reduce the complexities of the present system of inams to sufedposhes and ala-lambardars. In future the two classes will be distinct, while the former will be brought forthwith up to a suitable maximum and the latter will be gradually extinguished. Assignments have been revised. A reference to the Deputy Commissioner has elicited the following as correct figures to be substituted for those given at the end of paragraph 70 of the report :—

<i>Class of grant.</i>	<i>Number.</i>
In perpetuity	141
For maintenance of institutions...	43
During pleasure of Government...	72
For term of settlement	25
For life or lives	75
Total	356

The liability of assignees for the cost of assessing their assignments is under consideration. The patwari establishment does not at present require alteration but proposals have been submitted for the augmentation of the staff of kanungos. The record of tribal custom has been revised but there has been no re-issue of the Gazetteer and a Dastur-al-aml volume is, perhaps, not required though one can be prepared hereafter if experience should show that it is necessary.

12. In paragraph 84 of his report the Settlement Officer has discussed the question of the term of settlement and his arguments and conclusions are accepted by the Commissioner. The Financial Commissioner, however, observes that the state of the record and the period within which it will require revision are for the present purpose irrelevant. The order to be passed under section 53 (3) of the Land Revenue Act is concerned with the assessment only, and the discretion given to the Local Government, as described in paragraph 493 of the Settlement Manual, will doubtless be exercised with due regard to the instructions reproduced in paragraphs 490 and 492 of that Manual. In Gujrat past practice has been to fix the assessment for 20 years and that may be regarded as the normal term. In the north-east portion of the district the limit of cultivation has been reached, rents are fair, and agricultural production is not liable to violent fluctuations. There a term of 30 years would normally be suitable. South and west of the Upper Jhelum Canal, however, the district is comparatively backward in development and not fully cultivated. A rapid increase in cultivation and resources and an improvement in cropping are imminent in that part, while deterioration in the riverain tracts not likely to receive canal water is by no means impossible. The increase in resources will be to a great extent taken account of through the fluctuating assessment which has been introduced and so far there is less necessity for a short term. On the other hand the rates of assessment are at present applied to matured areas and it is necessary to retain power to revert at the earliest suitable time to an assessment on sown areas. Sir Alexander Diack indicated five years hence as a suitable time for the change in Kharian (paragraph 20 of his assessment orders) and ten years in Phalia (paragraph 31 of his assessment orders). Mr. Fagan would, however, suggest that it will be more convenient to fix a uniform term for all estates which may receive canal irrigation within that term and he would, accordingly, propose one of ten years in all such cases. As regards the remaining portions of the district he is of opinion that the development of canal irrigation in their vicinity must re-act on them more or less directly, whether favourably or unfavourably, and he would for this reason recommend in their case a period of 20 years, though he admits that in view of the considerations set forth in paragraphs 490 and 492 of the Settlement Manual a good case for a 30 years' term might be made out.

13. The Financial Commissioner has nothing to add to the Commissioner's remarks on the financial results of the settlement. Apart from the latter it is amply justified by the adjustment which it has effected of the revenue arrangements to the new conditions of the district. The Financial Commissioner agrees that the operations have been conducted with creditable expedition under conditions of considerable difficulty and complexity. Mr. Williamson has not spared himself in carrying out the settlement and is entitled to full credit for the results obtained. His assessment reports have already received the commendation of Government. The work of the officials whom he has favourably noticed is also deserving of recognition.

I have the honour to be,

SIR,

Your most obedient Servant,

V. CONNOLLY,

Senior Secretary to the Financial Commissioners, Punjab.

APPENDIX.

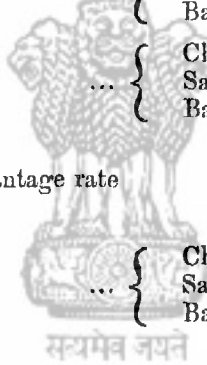
(SEE PARAGRAPHS 6 AND 7 OF THE FINANCIAL COMMISSIONER'S REVIEW.)

Note explanatory of various forms of assessment in Gujrat Tahsil.

With the exception of the uncoloured villages Nos. 10 Chah Chak Bega, 11 Thatti Multian, 12 Chak Chode, 29 Dhurke, 35 Dalia, 36 Kakka, and 38 Ishra, which have refused canal water and are under wholly fixed assessment [system (1) in paragraph 6 of review] the rest of the Nahri Circle (coloured yellow) will be assessed under [system (2)] with water advantage rate. One village, No. 15 Tarikha of the Hithar Circle, will also be assessed with water advantage rate under the same system and has been coloured yellow. The other circles of this tahsil are all under fixed assessment [system (1)].

TABLE OF RATES.

<i>Circle.</i>	<i>Assessment.</i>		<i>Rates.</i>	Rs.	A.	P.	<i>Demand.</i>
				Rs.			
Hithar	... Fixed	{	Chahi	3	0	0	} 1,11,000
			Sailab	2	0	0	
			Barani	1	9	0	
			Water advantage rate			1		8	0
Jatatar	... Fixed	{	Chahi	2	14	0	} 80,000
			Sailab	1	13	0	
			Barani	1	7	0	
			Water advantage rate			1		8	0
Nahri	... Fixed	{	Chahi	1	14	0	} 71,000
			Sailab	1	8	0	
			Barani	0	14	0	
			Water advantage rate			1		8	0
							in Kharif only.
Bulandi	... Fixed	{	Chahi	2	6	0	} 1,76,000
			Sailab	1	8	0	
			Barani	1	3	0	
			Water advantage rate			1		8	0



Note explanatory of various forms of assessment in Kharian Tahsil.

The following villages of the Gojar Circle, shown green and white on the map, are partly under fixed [system (1)] and partly under fluctuating assessment [system (3)].

<i>Number of Circle.</i>		<i>Name of Village.</i>
1	...	Chakori Bhilowal.
2	...	Dhal Bangas.
3	...	Dhup Sari.
30	...	Sagar Dhariwal.
31	...	Ranian.
32	...	Chechian.
33	...	Jaura.
61	...	Kirariwala Kalan.
62	...	Kirariwala Khurd.
64	...	Attowala.
65	...	Jhandu.
74	...	Bhao Ghasitpur.
75	...	Chhatta.
76	...	Sango.
80	...	Randhir.
82	...	Khori.
89	...	Rajo.
92	...	Khokhra.

Only 7 villages, *i.e.*, 66 Mahnowal, 71 Tibbi Mahl, 72 Tibbi Sair, 77 Pauranwala, 78 Isawal, 79 Chhimbar, and 88 Nun, are under fixed assessment [system (1)] and are shown uncoloured on the map. The remaining villages of this circle are under fluctuating assessment [system (3)] and are shown in green on the map.

All the other circles in this tahsil are under fixed assessment [system (1)] and are shown uncoloured on the map.

TABLE OF RATES.

<i>Circle.</i>	<i>Assessment.</i>	<i>Rates.</i>	<i>Demand.</i>
		Rs. A. P.	Rs.
Bet Jhelum	Fixed	{ Chahi ... 2 6 0 } { Sailab ... 1 14 0 } { Barani ... 1 0 0 }	21,000
Pabbi	Fixed	{ Chahi ... 2 0 0 } { Barani ... 0 14 0 }	44,000
Maira	Fixed	{ Chahi ... 2 0 0 } { Barani ... 1 3 0 }	1,67,000
Gojar	Fluctuating	{ Chahi ... 2 2 0 } { Nabri ... 2 4 0 } { Barani ... 1 2 0 }	1,26,000
	Fixed	{ Chahi ... 2 0 0 } { Barani ... 1 3 0 }	9,800

Note explanatory of various forms of assessment in the Phalia Tahsil.

Bet Jhelum.

The following villages are partly under fixed [system (1)] and partly under fluctuating assessment [system (3)]:—

Nos. 31 Ala, 41 Kirtowal, 42 Bad Shahpur, 43 Chak Dadan, 15 Nauthah, 16 Garhi Lutaf, and 17 Nawan Lok, have been shown on the map half-green half-white. All the remaining villages in this circle are under fixed assessment and are shown uncoloured.

Bar Circle.

The following villages are under (a) fluctuating assessment [system (3)] as regards area above the *nakka* or high bank (coloured green) and (b) under [system (2)] fixed assessment and water advantage rate as regards area below the bank (coloured yellow):—

Nos. 12 Chhoranwala, 15 Chak Salda, 16 Charanwala, 17 Bhindar Kalan, 18 Kotli Khurd, 19 Kotli Qazi, 20 Makhnanwali, 29 Murala, 30 Doburji, 31 Kot Sattar, 34 Charund, 41 Kot Biloch, 54 Boht, 55 Pir Bullah, 57 Malkan, 58 Thatti Bawa, 59 Chhani Jawaya Shah, 60 Lehdar, 61 Dhaul, 62 Madre, 73 Bagga, 77 Rattowal, 78 Makewal, 82 Khumb Khurd, and 164 Kaulowal.

Three following villages are under fixed assessment [system (1)] and have been left uncoloured in the map:—

Nos. 41 Lolianwali, 42 Kotli Khurd, and 43 Kotli Kalan. All the remaining villages in this circle are under fluctuating assessment [system (3)] and are shown in green.

Hithar East Circle.

The following villages are under fixed assessment [system (1)] and have been left uncoloured in the map:—

Nos. 1 Gaddu, 6 Hegarwala, 23 Kotla Mahmud Shah, 35 Chak Jano Kalan, 41 Kirlianwala, 54 Matmal, 55 Sarle, 67 Ruk, 68 Ragh, 69 Pindi Nura, 70 Pindi Magho, 71 Chak Mirak, 77 Bimbli, 103 Alhan, 104 Qadirabad, 105 Chak Kalan, 106 Chhani Mughlan, 103 Jago Kalan, 109 Tunpur, 114 Kala Shadian, 115 Bahri, 116 Randiali, 117 Murid, 118 Bahu, 119 Manga, 120 Kotha Bhola, 121 Agroya, 122 Sarang, 123 Sahnpal, 124 Chhani Sahnpal, 125 Ranmal, 126 Thatha Alia, 127 Thatha Neka, 128 Chhani Mehran, 129 Chhani Gehna, 130 Jokalian, 131 Pindi Dhothran, 132 Khosar, 135 Malian, 136 Chahrke, 137 Kamonki, 138 Laong, and 139 Shahdullapur.

All the remaining villages in this circle are under fixed assessment and water advantage rate [system (2)].

Hithar West Circle.

Is all under fluctuating assessment [system (3)].

TABLE OF RATES.

<i>Circle.</i>	<i>Assessment.</i>	<i>Rates.</i>	<i>Rs. A. P.</i>			<i>Demand.</i>		
						<i>Rs.</i>		
Bet Jhelum	... Fixed	{ Chahi	...	2	10	0	37,000	
			Sailab	...	1	14		0
			Barani	...	0	13		0
		Water advantage rate	...	1	4	0		
Bar (Proper)	... Fluctuating	{ Nahri	...	2	2	0	66,000	
			to					
			Chahi	...	2	10		0
		Barani	...	1	12	0		
			...	1	0	0		
		Water advantage rate	...	1	4	0		
Bar (Rukan)	... Fluctuating	{ Chahi	...	1	12	0	Fixed ... 2,300 Fluctuating ... 23,000 <hr/> 25,300	
			Sailab	...	1	8		0
			Barani	...	1	0		0

<i>Circle.</i>	<i>Assessment.</i>	<i>Rates.</i>	<i>Demand.</i>
		Rs. A. P.	Rs.
Bar (Jhelum Block) ...	Fixed ...	{ Chahi ... 2 0 0 } { Sailab ... 2 0 0 } { Barani ... 0 12 0 }	18,000
	Water advantage rate ...	1 4 0	
Bar (Chenab Block) ...	Fixed ...	{ Chahi ... 1 10 0 } { Barani ... 0 10 0 }	22,500
	Water advantage rate ...	1 0 0	
Hithar East ...	Fixed ...	{ Chahi ... 1 13 0 } { Sailab ... 1 10 0 } { Barani ... 0 10 0 }	1,46,000
	Water advantage rate ...	1 0 0	
Hithar West ...	Fluctuating ...	{ Chahi ... } 1 12 0 } { Nahri ... } { Sailab I ... 1 8 0 } { Sailab II ... 1 0 0 } { Barani ... 1 0 0 }	50,000



Commissioner's Review of the Final Settlement Report of the Gujrat District.

1. The Gujrat District is in respect of its physical features a conglomerate of the Northern, Central and Western Punjab. Travelling from the north through the rough and tumble of low hills and ravines which characterise the Attock, Rawalpindi and Jhelum Districts, one passes, when the river Jhelum has been crossed and the Pabbi Range surmounted, into the alluvial plain which has for so many centuries, with its 'round sky line of harvest,' made such an irresistible appeal to the marauding instincts of men accustomed to scratch amidst boulders for a footing for their plough bullocks. A fringe on the north-east of the district is of the Himalayan submontane type. To the south-west of this is a tract where well irrigation is common, and unirrigated cultivation fairly secure owing to a rainfall averaging 25 inches in the year; and again to the south-west of this is an area which presents the characteristics of a great portion of the Western Punjab, a land of sparse grazing and precarious cultivation. Here also, owing to the construction of the Upper Jhelum Canal, is proceeding that transformation which has turned such vast stretches of these arid uplands of the Western Punjab into the most fertile districts of the Province. The whole is on two sides enclosed by the riverains of the Jhelum and the Chenab. The total area of this district is 2,171 square miles.

2. Determined by its geography, the character of the people and history of the district are writ plain.

The people and their environment.

The rainfall which is dependent on the proximity of the Himalayas, and the fairly high level of the subterranean water-table, mean collective agricultural wealth, and individual poverty, in the eastern-central portion of the district, since crop security and facile cultivation inevitably result in an overgrowth of population. The northern situation of the district means the dominance of Islam, and consequently a people void of industrial imagination. The two long stretches of riverain introduce an element of fatalistic dependence on the vagaries of nature, which degenerates into an effortless acquiescence with whatever fortune may have in store.

Finally, the pressure on the soil, the struggle with nature in the hilly and submontane country, and the occasional failures of the rainfall, on which the bulk of the cultivation has hitherto depended, imply a certain surplus of fairly virile manhood ready to supplement agricultural earnings by service in the Army, or adventure abroad.

3. The district is served by both the main line of the North-Western Railway and the branch line which runs roughly parallel to the Jhelum river from Lala Musa to Malakwal. The road system has been fairly adequate to the needs of the district, but with the advent of irrigation from the Upper Jhelum Canal development in this direction, as in many others, will be necessary. The towns are but market towns, and rusticity as well as rurality has been the characteristics of the Gujrat District for many long years. Cultivation has spread by force of circumstances rather than by the attraction of labour to new fields offering a good return on industry. In the Gujrat and Kharian Tahsils the Settlement Officer considers that the limits of cultivation (74 per cent. of the total area in the former and 69 per cent. in the latter) have been reached. I imagine, however, that the process of extension of cultivation to lands which are now regarded as hardly culturable will to a certain extent continue. Even so it may be accepted that there can in the future be no considerable development in either of these two tahsils beyond that which will be due to irrigation from the Upper Jhelum Canal and from closer and more scientific cultivation. In the Phalia Tahsil there is large scope for expansion. Of the whole area, 51 per cent. only is cultivated, and here the water of the Upper Jhelum Canal will be applied to large stretches of excellent virgin soil.

Prospects of development.

4. From this brief survey of the general circumstances of the district, it will be gathered that, the construction of the Upper Jhelum Canal apart, the justification for re-assessment from the fiscal point of view lay in the fact that there had been during the previous twenty years a rise in the value of agricultural produce (*vide* paragraph 44 of the report) of something substantially over 50 per cent. The settlement has re-adjusted inequalities in the demand, and has provided for an increased revenue on a fluctuating basis *pari passu* with the development which must follow on the extension of canal irrigation.

5. When the re-settlement of the Gujrat District was ordered the feeling that we were not pushing to its logical conclusion the system of revenue record inaugurated by the late Colonel Wace dominated the counsels of the Punjab Government. If we once carefully adjust our demand to soil conditions in a fully developed district, and if we maintain our records by carefully attested incorporation of all changes in field boundaries and in proprietary and occupancy rights, settlement operations, it was held, might well consist merely of a revision of the old maps, and an arithmetical addition (fairly commensurate to the rise in prices from which agriculturists demonstrably benefited) to the previous demand. The suggestion that in respect of that portion of the Gujrat District commanded by the Upper Jhelum Canal, then under construction, a simple addition of 25 per cent. to the current demand might be accepted as the new assessment, found favour only long enough to delay the posting of a Settlement Officer during that period which enables such officer to co-ordinate the labours of his staff in collecting material which will be useful both for assessment and for record work. The idea that a simple correction of existing maps would suffice for a new record was made the basis of a practical experiment, and Mr. Williamson, when posted to Gujrat as Settlement Officer, found that a record had been prepared for him in respect of that part of the district destined to remain under a fixed assessment, which on examination proved to be defective in many respects. He has devoted a long chapter to explaining the nature of the difficulties which arose, and has done his best to dig a deep grave for the interment of 'abbreviated map correction' schemes. The moral is not, perhaps, that the theories which led to making of this experiment (which I admit gave trouble, lost time, caused expense, and resulted in an inferior record-of-rights in this particular instance) were mistaken. It was, I think, a misconception of the conditions precedent to the making of this experiment, and perhaps in some measure the manner in which it was conducted, that lead to break-down. The fact remains that if we admit the periodical necessity for remeasurements, for special settlement attestations of changes in the titles on which land is held, and for special settlement calculations of crop areas and outturns, and of rents and prices, we have also to admit that the whole machinery which we have organised for the maintenance of records relating to such matters is failing adequately to discharge its functions. Following on such an admission, the effort should be either to perfect the machinery or to scrap it. At present we maintain the machinery and scrap the manufacture or a large part of it.

6. A fixed assessment has been maintained in four assessment circles in the Gujrat Tahsil, three in the Kharian Tahsil and two in Phalia.

The total demand in these circles stood at Rs. 6,78,789, and now stands at Rs. 8,54,188, a trifle above the total of the sanctioned assessment. Making allowance for the fact (*vide* paragraph 60 of the report) that a small area, to which the former figure applies, has now come under fluctuating assessment, the increase is about Rs. 1,76,000, or nearly 26 per cent. Seeing that prices of agricultural produce have risen by over 50 per cent. since the district was last settled, and that the new assessment can by no process of calculation be made to equal 50 per cent. of the half-net assets of proprietary cultivation, the moderation of the Government demand requires no demonstration. This moderation can be justified by reference to the small holdings of the people, the large dependence of the district (excluding the areas commanded by the Upper Jhelum Canal,

which will come under a fluctuating system of assessment) on rainfall and river floods, the increased cost of living, the considerable adjustments of domestic economy which an addition of over 25 per cent. to the Government demand will involve, and the limited opportunities of adding to landlords' assets which will in the future present themselves to the proprietary body of a tract in which development can only be internal and dependent upon the slow march of science.

7. Progressive assessments (under the 33 per cent. rule) and protective leases on wells constructed within the last 20 years reduce the initial demanded by nearly Rs. 56,000, so that the actual increase of the fixed assessment in the first year of the new settlement will be about Rs. 1,20,000 only. The cost of settlement has exceeded the estimate by something over Rs. 20,000, which is, I think, small relative to the unexpected difficulties which Mr. Williamson encountered. Of the total cost amounting to Rs. 3,07,400 or thereabouts (paragraph 69 of the report), a share will be borne by the jagirdars of the district. It is anticipated that the fluctuating assessments will yield an enhanced revenue of 6 lakhs per annum when irrigation from the Upper Jhelum Canal is fully developed. A profit and loss account of the settlement cannot of course take credit for more than a fraction of this sum. But it may be said that on the ordinary basis of calculation the cost of settlement will be recouped to Government in the course of a couple of years.

All things considered, it may fairly be stated to Mr. Williamson's credit that a difficult settlement has been completed with reasonable expedition, with satisfactory results to Government, and with scrupulous fairness to the people. Mr. Williamson's village inspections (so infinitely important a branch of settlement work) were most thorough, and his distribution has, within the limits of practicality, been equitable.

8. It will be seen (*vide* paragraph 72 of the report) that a valuable concession has been made to the revenue-payers of the district by fixing the dates for recovery somewhat later than heretofore. The land is now the security for the payment of revenue and not the crop as it was in the days when the demand was relatively to the value of the assets much higher, and there was little security of tenure. Everything which is done, therefore, to enable the zamindar to make the best of the market can be done both wisely and safely. The scheme referred to by Mr. Williamson for ensuring prompt payment on fixed dates is devised in the best interests of the people, and so far as experience has gone promises to be successful and popular.

9. As to the term of settlement, I have nothing to add to the arguments and recommendations in paragraph 84 of the report.

10. I have not attempted in this review to condense or paraphrase Mr. Williamson's matter. He has stated the facts with lucidity and without over-elaboration.

F. POPHAM YOUNG, LIEUT.-COL.,

Commissioner, Rawalpindi Division.

The 8th August 1916.

FINAL REPORT
OF THE
FOURTH REGULAR SETTLEMENT
OF THE
GUJRAT DISTRICT.
1912-16.

CHAPTER I.—THE DISTRICT.

1. The Gujrat district occupies almost a rectangle in the tract of country lying between the Jhelum and Chenab rivers. It is bounded on the east by the Jammu State, and on the west by the Shahpur district. The boundaries along the two rivers which used to be that of the deep stream have now been fixed. The boundary with Jammu is marked with pillars. The border towards Shahpur is roughly the line of the Lower Jhelum Canal. The latter border has undergone some changes. In 1856 forty-one villages were transferred from Shahpur, and twenty-eight to Shahpur, as detailed in paragraph 40 of Captain Hector Mackenzie's Final Report of the Settlement of 1855, and in 1857 country east of the Tawi river was transferred to Sialkot. Now 81 more villages have been transferred from Shahpur to Gujrat including most of the 28 given up in 1856.

The north-east is submontane in character, and as far as the Grand Trunk Road is the slope from the foot hills of the Himalaya down to the plains. The surface of this part is uneven and is much cut up by the sandy beds of streams which drain from the Pabbi hills and from the Jammu border down towards the Chenab, though they do not all succeed in reaching the river. The largest is the Bhimbar, which starts at the eastern end of the Pabbi hills, and receives the drainage of much of the Kharian and Gujrat tahsils. It used to reach the Chenab in its own bed, but it has now for the last five miles or so been turned into the Upper Jhelum Canal. The other main feature of the eastern part of the district is the Pabbi hill, which is a low range cutting off a corner of the district. Its sides are much cut up by ravines, which on the south side spread water over the country and on the north side drain quickly into the Jhelum river.

The south-west of the district that is roughly west of Dinga is of a different character for it is the central Punjab plain, with good soil, but with such a small and variable rainfall that cultivation is difficult without artificial irrigation. The plain has at one time been encroached upon by both the rivers which in receding have left traces of their old bed. That of the Jhelum is only small. But the old bed of the Chenab can be seen in a strip about 8 miles wide from the present bed. It is marked by an old high bank, called *nakka* in this district. The soil is as might be expected sandy below with a surface layer of silt which is increased in places by further silt of the drainage from the central plateau.

The total area is now 2,171 square miles. For administrative purposes it is divided into three tahsils. Gujrat and Kharian divide the eastern part of the district, Phalia is the western part and as its area is large it has a sub-tahsil at Rukan. When the Phalia tahsil is irrigated the miscellaneous work will increase so a proposal has been made to divide it into two; but this has been negatived, at any rate till the end of the war.

2. The rainfall of the district follows the character of the land, for the submontane part has a good and fairly constant rainfall while the Bar part has a small and variable fall. The details will be found in the three assessment reports, but it is enough here to say that the annual average on the Jammu border is over 40 inches, at Kharian it is 29·75, at Gujrat 26·38, at Dinga 19·74, at Phalia 20·94 and at head Fakirian on the extreme western border of the district, 18·16 inches. But west of Dinga the rainfall is not only less in quantity but more variable in distribution, and it is from about that point that barani cultivation ceases in a dry year. To the east of the Grand Trunk Road crops seldom fail from lack of rain but to the west of that line failures have been numerous, and suspensions and remissions are wanted if the rains are scanty or ill-timed. However the need for suspensions in the future will be obviated by the introduction of canal irrigation, and a fluctuating assessment.

3. Communications are little changed since last settlement. The Grand Trunk Road runs through the district from Wazirabad to Jhelum. Other metalled roads are only a small one of nine miles to Jalalpur Jattan and a part to Kunjah which has been in progress now for some years. The unmetalled roads of the district are mostly fairly good, because the traffic is chiefly on pack animals and there are few carts. The district is cut off by the rivers from traffic with other districts. There is one bridge over the river Jhelum opposite Jhelum city, but there is no bridge over the Chenab for carts. Foot passengers only can cross by the railway bridge.

The main line of the North-Western Railway runs parallel to the Grand Trunk Road and from Lala Musa is a branch to Malakwal whence lines diverge to the various parts of the western Punjab. A survey for a narrow gauge railway from Gujrat to Sargodha through Phalia was made in 1913, but the project is now indefinitely postponed owing to the war.

There are no large towns. Gujrat, the head-quarters of the district, is the largest with 19,000 inhabitants. There are three other small municipalities Jalalpur Jattan (11,600), Dinga (5,350), and Kunjah (7,000), and 2 notified areas, Shadiwal (6,600) and Lala Musa (1,287). The head-quarters of the two out-lying tahsils, Kharian and Phalia, are merely large villages. There are no markets of any importance, though it is possible that at Dinga and Malakwal markets will come into existence when canal irrigation begins. Possibly also Baha-ud-din will be a good place for trade.

4. The population of the district varies a good deal according to the cultivation. In the eastern half where rainfall is nearly always enough for the maturing of crops, population is dense. In the Gujrat tahsil the incidence of the population on the square mile of total area is 536, in Kharian 430, in Phalia 215. The total population of the district was 800,876 in 1891, but only 780,813 in 1911. The decline has been due to plague and to emigration to the canal colonies. The incidence of the population per square mile of cultivation is still large as it is in Gujrat 721, Kharian 628, Phalia 423. Many changes may be expected when the Bar of Phalia is irrigated for it will draw men from the more congested parts of the Gujrat and Kharian tahsils and especially from the Hithar circles of Phalia which are near and badly off.

The proprietary body consists almost entirely of Musalman cultivators. Gujars and Jats of various clans predominate. The Jats are the most important and of them the Waraich clan is found in Gujrat and Kharian, but in the Phalia tahsil they are almost all Tarar, Ranjha and Gondal. The most important sub-divisions of the Gujars are Chechi and Khatana. In the Kharian tahsil the Chib Rajput tribe is important also. Other agricultural tribes of less numerical importance are Awan, Mogal and Saiads.

5. Seventy-four per cent. of the total area is cultivated in Gujrat, 69 in Kharian, and 51 in Phalia. For the district as a whole the figure is 62. The two eastern tahsils are fully cultivated and the limit of cultivation

seems to have been reached under present conditions. In both these tahsils considerable damage is done by the hill streams which cut into the land. In their upper reaches the streams often scour out wide beds and deposit large amounts of sand. The people seem unable to do anything to stop the damage. Action by Government would be expensive and of doubtful benefit if it were confined to the beds of the streams. It is necessary for the men to combine and control each stream from its source. West of the grand trunk road the chief defect for the purposes of cultivation is lack of rain. Therefore the possibility of expansion is great provided water can be got and the irrigation from the Upper Jhelum Canal will work a great change here. In the Hithar circles of Phalia the change will be less: this is an old bed of the river with stretches of sand; and as the parts most worth cultivation are already cultivated and canal irrigation is to be only 25 per cent. in the *kharif*, extension of cultivation will not be so great as in the Bar.

6. The water level varies a great deal. In the middle of the Pabbi hills water cannot be found at all. In the hollows of the hills it is often at 100 feet from the surface. In the middle of the district the water level may be put at 50 feet from the surface and thence it declines as one nears the river bed till it is found at about 12 to 15 feet. Well irrigation is not general where the depth to water is more than 35 feet. The number of wells has increased by 819 since last settlement and in the parts outside the irrigation boundary they will continue to increase. The total number in the district is now given as 10,263. The well is always a Persian wheel except in some parts of the Pabbi towards the Jhelum river where on the banks of hill streams shallow unlined wells are in use and water is lifted from these by a balanced pole.

7. The comparative importance of the various crops is shown in the form of percentages on the total matured area of both harvests in the following table. The figures are not in every case based on the same material as they are taken from the average results of the period of years used as a basis for the produce estimate. The period was 10 years in Gujrat, 5 in Kharian, and 4 in Phalia. But the average is correct enough to be accepted without vitiating the comparison:—

Crops.		TAHSIL.			Total District.
		Gujrat	Kharian.	Phalia.	
Kharif	Rice	2	...	1	1
	Maize	4	1	2	2
	Jowar	4	7	4	5
	Bajra	12	18	13	14
	Sugarcane	1	...	2	1
	Cotton	2	2	3	2
	Others	7	8	2	6
	Fodder	3	4	4	4
Total Kharif		35	40	31	35
Rabi	Wheat	39	32	44	39
	Wheat gram	7	10	4	7
	Gram	1	6	7	5
	Oilseeds	3	4	2	3
	Vegetables	1	...	1	1
	Tobacco	1	...	...	...
	Others	8	5	4	5
	Fodder	5	3	7	5
	Total Rabi	65	60	69	65

Wheat is by far the most important grain grown. The custom of sowing it mixed with gram is increasing as the people find it advantageous and the sowing of gram alone in the more sandy parts of the district is more common than it was at last settlement. This is a good sign as the crop makes soil available in which other grains will not grow. In the kharif harvest the chief crop is *bajra* or great millet which is the staple food of the people.

during the winter months. "Others" in the *kharif* includes mainly *moth* which is important in the eastern end of the district. 'Others' in the *rabi* is mainly barley and *massar*. Sugar cane in this district is not very good, and is grown almost entirely for local consumption. A good deal of it is used as fodder. Cotton is grown for home use. The total cultivated area of the district is 861,467 acres on which 886,443 acres are sown annually according to the average of the selected years and 788,030 come to maturity. So on each 100 acres of cultivated land 91 acres of crops are raised.

8. The district is one of small land owners. Very few men have more than one or two hundred acres of land now cultivated though in the Phalia tahsil many men have large holdings including land which will be cultivated with irrigation. But the district as a whole is essentially a tract of small peasant proprietors and as the general rule of succession is that all sons share their father's land equally, holdings are continually becoming smaller. At present the average cultivated area for each shareholder is 5 acres in Gujrat, 5 in Kharian, 7 in Phalia. In the Hithar circle of Gujrat the average is the lowest only 4 acres and even if that area of soil be fertile it can easily be realised that existence on its produce is a hard struggle. It is a natural consequence that if an owner has only 6 or 7 acres he will cultivate himself as there is no surplus to let out to tenants or if he has only an acre or two he will look for service in the army or employment in the canal colonies and leave that small area in the hand of a tenant whether a relative or a stranger. In the case of mortgaged land if the mortgage is to money-lender or other non-agriculturist the original owner remains as cultivator but in the capacity of tenant. The percentage cultivated by actual owners as such is 56 in Gujrat, 61 in Kharian and 60 in Phalia. Of the rest tenants-at-will as described above cultivate 33 per cent. in Gujrat, 28 in Kharian, and 37 in Phalia. Occupancy-tenants do not hold much in the district, only seven per cent. of the cultivated area being 10 per cent. in Gujrat, 10 in Kharian, and only one per cent. in Phalia. Occupancy rights tend to diminish as old rights lapse and few new ones are created. The rents paid by tenants-at-will are seldom in cash. The area under cash rent is almost negligible, and the amount paid is not a true indication of the value of the land, as it is usually a concession to a relative or a village servant. The commonest form of rent is a fraction of the produce. This is lenient for the tenant in bad years and profitable for the landlord on the whole. In the secure eastern half of the district the common share is half after deducting certain customary dues. Where the crops are more precarious the share is generally one-third, and where the trouble of agriculture is greatest and the return least the landlord can get only one-fourth or even fifth and even then has to allow concessions of fodder to the tenant.

9. The principal statistics regarding land sold since last settlement and now under mortgage are shown in the following table:—

Tahsil.		SALES SINCE SETTLEMENT.			MORTGAGE WITH POSSESSION NOW EXISTING.		
		To agri- culturists.	To others.	Total.	To agri- culturists.	To others.	Total.
Gujrat ...	{ Percentage of cultivated area...	5.1	2.8	8.2	8.2	7.7	15.9
	{ Price per acre, Rs. ...	139	117	131	110	80	97
Kharian ...	{ Percentage of cultivated area...	3.4	1.4	4.8	7.0	6.0	13.0
	{ Price per acre, Rs. ..	137	124	134	112	79	97
Phalia ...	{ Percentage of cultivated area...	5.8	3.7	9.5	2.8	8.9	11.7
	{ Price per acre, Rs. ...	57	58	57	35	35	35
District ...	{ Percentage of cultivated area...	4.9	2.7	7.6	5.9	7.6	13.5
	{ Price per acre, Rs. ...	102	88	112	97	61	77

The small proportion of land transferred by sale is evidence that the general condition of the district is prosperous. The price given in the statement being an average for a long period, understates the present selling value of land. In the last period of 5 years taken for each tahsil (varying only between 1907-08 to 1911-12 in Gujrat, and 1909-10 to 1913-14 in Phalia) the average price for each cultivated acre sold was Rs. 183 in Gujrat, Rs. 207 in Kharian, and Rs. 79 in Phalia. During the period of settlement the value of cultivated land has risen by 131 per cent. in Gujrat, 125 per cent. in Kharian, and 152 per cent. in Phalia, and it is worthy of note that even in Phalia where the value of land was so little before it is now increasing. Part of the increase is due to the prospect of canal irrigation.

In all three tahsils the proportion of land mortgaged is fairly low. In Gujrat it is 12 per cent. of the total area compared with 17 per cent. at the settlement. In Kharian it is 10 compared with 8 at last settlement and in Phalia 8 compared with 6. The years of serious famine 1896-97 and 1900-01 with years of scarcity like 1907-08 have resulted in large areas being mortgaged, but in the last 10 years the redemptions have exceeded fresh mortgages in all tahsils. There is still considerable recuperative power therefore. The recent rise in prices has enabled many men to redeem their land and there are many instances in the village records where men have got only half the previous area recorded as the pledge for the original sum. It is a good point about the low mortgage price in Phalia that with returning prosperity and the prospect of further irrigation the mortgages will be more easily redeemed.

10. In the period of 20 years since last settlement the number of cattle and agricultural and domestic animals generally has increased, with the exception of cows. There has been a large increase in buffaloes. Male buffaloes are cheaper though less efficient workers than bullocks. She-buffaloes are preferred to cows because they give more milk, remain longer in milk, breed for a longer period and thrive better at the stall. Cattle are of fairly good quality except in the Hithar of Phalia where grazing is poor and the cattle have to be worked hard to irrigate the large areas attached to each well. Cattle are kept for home use in the more thickly-populated eastern half of the district, but in the wide stretches of the Bar they are kept for profit and sale also.

11. There is not much extra income from the sale of cattle and milk except near the larger towns and they are not large enough to make an appreciable difference. A good deal of *ghi* is sold in the towns and is exported by railway. The estimate in the assessment reports put this item at 26,588 maunds roughly worth Rs. 10,63,520.

Military service attracts many men in the Gujrat and Kharian tahsils especially among the Jat, Chib, and Labana Sikh villages. The pay and pensions of these men contribute something to the prosperity of those who stay at home. Last year the amount of military pensions paid through the Post Office was Rs. 1,00,926. Many men too have emigrated to Australia, or gone down-country to trade and they bring back considerable sums. The men who have gone to the canal colonies as grantees or tenants bring back money to their old homes.

CHAPTER II.—FISCAL HISTORY.

12. The fiscal history of the district is given in paragraphs 11 to 15 of my Gujrat Assessment Report, and may be reproduced below for the period up to 1888.

At the beginning of British rule collections were based on the value of the produce realized by the Darbar. Under Maharaja Ranjit Singh the revenue was assessed mostly in kind, but some times in cash, and was recovered from groups of villages through local agents of varying designation. Local Chaudhries often took a contract for the revenue of their zails and assumed the position of half Government officials, half class representatives. The mode of

administration seems to have been successful. The Sikh zails were the basis of the arrangement of the district into the three tahsils of Gujrat, Kharian and Phalia in 1849, but were disregarded at a re-arrangement at the settlement of 1856, a circumstance which Captain Hector Mackenzie regretted.

When the Punjab came under British management in 1846, Lieutenant Lake, Assistant Resident, made a summary money settlement of the greater

part of the district, basing his assessment mainly on the average of the payment of the three previous years. At annexation in 1849, a summary settlement was made by Mr. Melvill, Secretary to the Board of Administration. It was effected at Lahore and with considerable difficulty, as the chief land-owners came forward unwillingly. It was soon found to be both too unequal and in many instances too high to stand.

Accordingly in 1851 a revision was attempted by the District Officer.

It had not, however, made much progress when it was seen that it would not be an improvement. It was therefore cancelled, and matters remained in *status quo* till 1852. In that year the district was visited by Sir Henry Lawrence who commented with great severity upon the inequality of the assessment. The Deputy Commissioner, Mr. Brand Sapte, was instructed to revise the assessment without further loss of time, and the work was accomplished in three months. The settlement proved a good one. It corrected many, and left few inequalities. It gave a reduction of 5·85 per cent. and a rate on cultivation of Re. 1-10-5. The real rate was, however, considerably below this, as Mr. Sapte excluded from his revenue-paying area a large amount of land nominally inam but of which a great portion really bore taxation. When confirming the settlement, the Board in their letter No. 3342, dated 28th October 1852, expressed the opinion that it was moderate, and even light, the rate certainly low. A comparison of paragraphs 93 and 123 of Captain Hector Mackenzie's report of 1861 seems to show that the incidence on cultivation at this settlement was really Re. 1-3-3.

A regular settlement was begun in 1852 by Mr. (later Sir Richard) Temple, who was succeeded in 1854 by Mr. E. A. Prinsep and in 1856 by Cap-

tain Hector Mackenzie who reported the result in 1859. A reduction of 8 per cent. was given and a rate of Re. 1-2-2 per cultivated acre imposed. The settlement was confirmed in 1860 for a term of 10 years to expire in 1867-68.

A revised assessment of the district was begun in 1865 by Captain Waterfield, and was completed in 1868,

taking effect from the rabi harvest of that year. An immediate increase of 5·79 per cent. was taken giving on cultivation a rate of Re. 0-15-5 and a total increase after 15 years when progressive jamas had taken effect of 12·79 over the assessment of the regular settlement. The assessment was considered by the Lieutenant-Governor to be much too low, but under the instructions of the Government of India the assessment as announced by the settlement officer was confirmed. The progressive jamas were not made with a view to future expansion. They were given so as not to raise too suddenly the demand of the village. But the village note-books show that in many cases the assessing officer wished to allow the owners a chance of bringing more land under cultivation before the increase took effect.

13. The next revision of the settlement was made by Captain H. S. P. Davies between 1888 and 1893 and the settlement was confirmed for 20 years

from the date of its introduction in each tahsil. Captain Davies found a considerable increase, 27 per cent. in cultivated area, but as much as 72 per cent. in Phalia, and was able easily to take an increase of 25 per cent. in Gujrat, 36 per cent. in Kharian, and 42 per cent. in Phalia, making 36 per cent. for the whole district. Even this made a very small rise in the incidence per acre. The villages now transferred from Shahpur were included in the Bhera tahsil of that

district. They had been assessed in 1858 and again by Mr. J. Wilson in 1888, when a rise of 100 per cent. was taken.

14. The figures for each assessment circle will be found in the respective assessment reports, but the following table shows the result of each settlement by tahsils with the increase per cent. and where possible, the incidence per cultivated acre :—

Tahsil.	1st summary settlement, 1849.	2nd summary settlement, 1852.	REGULAR SETTLEMENT, 1852.		REVISED SETTLEMENT, 1868.		2ND REVISED SETTLEMENT, 1892.	
			Initial.	Final.	Initial.	Final.	Initial.	Final.
Gujrat ...	281,873	274,449	...	269,113	...	293,589	365,192	348,876
	1-5-0	-2-5				+ 9-1	+ 24-4	
		1-3-3		1-3-2		1-2-11	1-4-11	1-4-8
Kharian ...	162,361	156,310	143,950	144,680	157,327	174,579	237,349	228,241
		- 3-7	-7-7	...	+ 8-7		+ 36	
		1-1-8	1-0-5	0-12-1	0-13-2	0-10-9	0-14-7	0-13-8
Phalia ...	156,560	147,723	139,608	143,053	159,515	185,171	262,137	253,745
		-5-8	-5-5	...	+ 11-5		+ 41-6	
			1-4-3	0-14-11	1-0-8	0-11-8	1-0-2	0-15-6
	1859	1853		1858				
			Initial.			Final.		
Sub-Tahsil Rukan.	33,714	27,545	24,259	...	...	25,731	51,412	37,955
		-18-3	- 11-9			+ 6-1	+ 99-3	
			1-2-9			0-7-7	0-15-3	0-10-7

The figures do not admit of exact comparison. Those for the first summary settlements do not include assessments on jagir villages, and up to the end of the 1868 settlement the sum does not include petty assignments, or the emoluments of rural office holders. The rate per cultivated acre was not easy to attest. But even allowing for small errors, it is clear that the successive assessments have been light and that the increase of revenue has always been met by an increase of cultivated area. The revenue of the settlement now completed is not put in this statement, because conditions have changed, and a considerable area has now been put under fluctuating assessment, therefore comparison cannot be made.

15. The assessment imposed at last settlement was lenient, but the character of the seasons has been more than usually marked by famine and scarcity and any assessment would have been severely tested. In the Gujrat tahsil only the part now forming the Nahri Circle has required any large amount of suspensions. In the Kharian tahsil the part west of the grand trunk road has had suspensions when needed. In Phalia there have been suspensions amounting to a little more than in Kharian. The sub-tahsil Rukan has been worst off, for there the settlement broke down owing to river changes and calamities of season and both suspensions and remissions were frequent. In a district so largely dependent on rain for its agriculture it is to be expected that suspensions will be required and must be given, but if the assessment is light, there should be no hesitation or difficulty in recovering. The conclusion come to by the Financial Commissioner in paragraph 4 of his orders on my Phalia assessment report is that the assessment in Phalia

was unquestionably light. He said "the figures are indicative rather of a light demand collected with elasticity and care than of severity." He went on to say "in Kharian and Gujrat undoubtedly the old demand was lighter still, and we were consequently unable to raise it so as to make it absorb anything approaching the State's proper share of net-assets." If calculated on the average demand for each year the total amount suspended in the period of settlement was in Gujrat 2·5 per cent. of the total revenue, in Kharian 7·1 per cent., and in Phalia 8·9 per cent. The sums actually remitted were 0·35 per cent., 1·8 per cent. and 4·2 per cent., respectively, of the total revenue.

CHAPTER III.—REVISION OF THE RECORD.

16. The tendency of Punjab settlement policy for a long time past has been to avoid the trouble and expense of making completely new maps of any district, and where possible existing maps have been revised. The procedure of the Gujrat settlement shows an extreme application of the method.

At last settlement between 1888 and 1893 the maps of 539 villages were corrected, and 886 villages were remeasured altogether on either the square or plane table system. The method of revision and the details of the above numbers will be seen in paragraphs 24 to 27 of Captain Davies' final settlement report. The maps corrected were nearly all in tahsils Gujrat and Kharian, and it is therefore to be noticed that when instructions were given about the system of measurement to be adopted in Gujrat there were 539 villages whose maps had never been done on the square system, and where the original maps dated from 1868. But it must also be noted that (paragraph 25 of Captain Davies' final report) the scale used at revised settlement was 50 karams to the inch. Therefore where map correction has now been done the map is still of the scale of 50 karams, and in the whole district there are still 536 villages with these maps though all new measurement is done on the scale of 40 karams. Captain Davies shows the various tests employed to see whether revision or remeasurement should be done. He says (paragraph 24) :—

"In all cases where there was the slightest doubt remeasurement was ordered. Considering the amount of time spent on tracing the old maps the various methods of testing the correctness of the map, and the actual preparation of the corrected maps, I consider that there was very slight saving in the amount of time the patwari was employed on them, and there is by no means the certainty that the corrected maps are as correct as those of the villages re-measured. If the work had to be done again it would be more satisfactory to at once re-measure the whole area".

17. For this settlement it was decided to make the experiment of bringing the maps and records of the greater part of the district up to date before settlement operations were started. Sanction was given in Punjab Government letter No. 1584, dated 5th August 1910. The work was not to be done in villages which would be measured by killabandi, or in riverain villages, where complete remeasurement was required. The map correction proposed was to be of a more abbreviated kind than that in other districts. The patwari had to prepare at a special girdawari a list of all fields of which the map required correction. These would be of three kinds—

(4) Fields, which in consequence of past changes, such as partition, sale, mortgage with possession, or exchange, had already received *batta* numbers in the current records: (ii) those in which changes had taken place which ought to be embodied in the map, but which had hitherto been recognised only by *min* numbers. An example is clearly recognised separate possession by two or more share-holders in a joint holding: (iii) new fields which ought to be shown in the map, but which had not yet been given separate number of any kind, *e.g.*, fields recorded as unirrigated, part of which have become irrigated, or fields inconveniently large for crop inspection purposes. In such cases fields were to be sub divided only in accordance with boundaries actually existing on the ground. If the previous records of a field showed a discrepancy of more than ten per cent.

the field was to be remeasured. These fields were to be shown by a red cross in the "remarks" column of the khasra girdawari, afterwards the patwari had to go over them on the spot and in the presence of the persons concerned check all the entries of the previous jamabandi: while doing this he had to write up all mutations coming to light and note in the khasra all new fields which would be required. At this stage the patwari was directed to bring the genealogical tree up to date by preparing an abbreviated new one showing in one line the names of persons in existence at last settlement. For the purpose of map correction the patwari was provided with a copy of the settlement map of the village on long cloth, but omitting the numbers showing the measurements (karukan). The settlement numbers were shown in pencil. With this tracing in his hand the patwari was to visit each field and remeasure all the new field in his list. He had to re-chain only such boundaries as had been altered by the sub-division of fields, and note in pencil the measurements (karukan) actually made. Then keeping as far as possible to the old numbers a new series was made in pencil. After the check by the kanungo the new numbers would be inked in: the old field boundaries then being shown in black, the new ones in red. A supplementary field book was to be made, showing only the fields corrected or altered. As the new field numbers were inked in on the cloth map they were to be noted in the column of the khasra girdawari. The area of the fields had to be calculated on the old method of last settlement to avoid confusion, i.e., the average length of each pair of opposite sides was multiplied together.

Another copy of the old map had been made by a tracing in pencil on wax cloth. This was made a complete map by copying the new entries from the corrected map, and the old unaltered karukan from the map of last settlement. It was filed in the tahsil, and a copy of it was made on long cloth (latha) for the use of the patwari.

The above instructions were carried out by a special staff working under the supervision of Rai Sahib Hira Singh, Extra Assistant Commissioner, who also became Extra Assistant Settlement Officer when regular settlement operations began. He began work in October 1910. The complete revision was calculated to take not more than two years, and in paragraph 9 of letter No. 270, dated 28th March 1912, the Financial Commissioner said that by October 1912 the revised record should be ready for the whole district except the part where killabandi had to be done. The programme of work was that one-third was to be done in the first year and two-thirds in the second year, though this calculation omitted to regard the large amount of work to be thrown on the patwaris by the census of 1911, and in the end the jamabandis were not ready by October 1912, but were with difficulty filed by the end of March 1913, when Rai Sahib Hira Singh left the district on retirement. The total number of villages in which he made new records was 1,060.

18. The map correction was carried out in the greater part of the

Method of the present settlement.

Gujrat and Kharian tahsils and in the Hithar circles of the Phalia tahsil, that is, in all parts where more precise measurement was not to be done. But in the Gojar of Kharian map correction was done and also later killabandi. The principle underlying this system is that the new maps are merely supplementary to those of last settlement and are to be considered authoritative only as regards those fields which have undergone changes since last settlement. The staff in charge of such map correction is not responsible for the accuracy of the maps of fields which have undergone no change, or for the karukan other than those chained by them. Therefore as in other districts where this method was in force the special staff was responsible for only half the new map. It was a further step that in Gujrat the Settlement Officer was not responsible for the work at all. The map correction was done before I arrived and it was presumed that the work was adequate to form a settlement record, and need not require further attention, and although I have done something as described below to improve the record I was not in a position to do more. The jamabandi of Rai Sahib Hira Singh has been accepted as the settlement record in Gujrat tahsil, and in part of Kharian, but has been superseded by a later jamabandi in Phalia.

19. It was soon found that the result of map correction was in many ways defective. A large number of mutations was constantly being attested and that was a significant indication that the record was not really up to date or correct. Efforts were made to keep the record right, but the great test remained to see whether the distribution of revenue could be made upon it. When the *bachh* papers were being prepared numerous mistakes in the jamabandis were found, and in many cases a good deal of time had to be spent on correcting them before the *bachh* could be proceeded with. The great defect in the whole system was that the patwari had no complete field book and no khatauni at all. The procedure laid down for the making of a quadrennial jamabandi may be appropriate when the serial numbering of a village is not changed. But where that radical change is made a field book is necessary: otherwise the patwari cannot make his totals, to see whether all the land of the village has been properly accounted for. The expedient of having an old field book with the old numbering and a supplementary field book with an incomplete numbering, only caused complication. A khatauni is necessary because it helps the patwari and his superiors to check individual holdings, and by the rule that a copy is to be given to the villager it ensures a check by the man most intimately concerned before the work is finally recorded. The innovation that changes of number and other particulars should be recorded in the margin of the khasra girdawari meant that it was done in an inconveniently narrow place (for if the girdawari had been in use for 4 years there was no blank space left), and in a form extremely hard for any one to check or even read. The difficulty was increased if the patwari was transferred to another circle, and in such a press of work this often happened. The patwari often made out for himself an informal list which was really an unauthorised and unchecked khatauni. In the end the patwari had taken just as much trouble in making rough notes as he would have done in writing up the usual papers, but the result was worse. Further the important matter of attestation of kinds of soil was almost entirely neglected. It is true that changes in soil have to be recorded even at quadrennial attestation. But my experience of the district is that it is seldom done thoroughly, but left till settlement. As the procedure of the abbreviated map correction was largely paper work changes were not recorded even in altered fields, and practically in none of the unaltered fields. The record of chahi land is important for the assessment. In the Gujrat tahsil I found a discrepancy but not enough to affect the assessment unduly. But in Phalia I found a large difference and had at the last moment to ask for a revision of the assessment (see paragraph 60). Another defect arises from the character of the country in the Gujrat and Kharian tahsils. The hill streams which have wide sandy beds are constantly changing their courses; and either encroaching on cultivated land or reclaiming land previously unculturable. A good map should show the line of these streams: although the land in their beds as well as on their banks is owned by the villages. But as the instructions were chiefly concerned with ownership and tenancy, the changes in kind of soil in unaltered fields got no attention. I subsequently had lines drawn to show the present bank of streams so that in future at any rate the settlement course can be seen. The maps were not coloured, and it was difficult to see where the village habitation is, or roads, or any other prominent feature. I had the colouring done but naturally it took up time. A great defect is that for unaltered fields no karukan are shown. The map is incomplete in itself, and for any field unaltered during map correction the old map is still the only authority. Though it is an advantage that the tracing cloth copy in the tahsil and the long cloth copy in the possession of the patwari have been completed by addition of the karukan in unaltered fields. But the comparison of these fair copies with the original map was owing to lack of time, and lack of staff, not very well done. The shajranasab is also an incomplete document and is supplementary to the one of last settlement. But in practice it does not allow the patwari's work to be done. Every man who was in possession at last settlement is shown on one line whether he was then eighty years old or only one year. The patwari cannot make out any mutation of inheritance except the simple one of son inheriting from a father, without

reference to the old genealogical tree which he had by rule to send into the tahsil.

20. The above are some of the defects of the system. There were other grave defects which are due to the method with which the system was carried out. The staff employed was far too small. There were only 3 Naib Tahsildars for 3 tahsils, 10 kanungos, and 60 patwaris extra, and the full number of patwaris was not employed by Rai Sahib Hira Singh. The Naib Tahsildar had about 30 to 40 patwaris to control. He could get round to each man only once in about 1½ or 2 months, and then spend only one day. In that one day he had innumerable mutations to attest, and could give little time to the check of the work. The work was more than the Naib Tahsildars could check and in map correction the patwari's outturn is greater than at remeasurement. Hence they failed to check the new map with the old original when the corrections had been made, and apart from changes in a map frequent copying is the source of many errors, and check is required. The attestation of the old jamabandi was scamped. The new jamabandi too was not checked with the old jamabandi but only with the imperfect material from which the new one was made, and the patwari's copy was not compared with the Government copy till I put on the settlement staff to do it. The final result of defective system, errors due to hasty work and insufficient inspection, was naturally a record not good enough to the basis of assessment. I therefore had to complete the record as far as I could, though my original schedule made no allowance of men or time or money for the purpose.

21. The staff had to spend a good deal of time in checking the new jamabandi with the old one before the bachh papers could be prepared, and in comparing the 2 copies of the new jamabandi with one another. Colouring of the maps was done and a new genealogical tree was made in every village which according to the instructions for making a genealogical tree at settlement goes back to the fourth generation. I further had an index made showing every khasra number and the holding in which it is to be found. This is a useful paper for it ensures that numbers are not omitted or duplicated. In subsequent crop inspections and in the making of subsequent jamabandis I have had special attention paid to the classification of soil. Further in dealing with hundreds of applications for *nishandahi* I have had to take up the time of my staff with showing the boundaries of fields which ought to have been shown to the zamindars during measurement at a normal re-settlement.

22. To give a conclusion on the whole matter of the abbreviated map correction, it has now been abandoned and will not be attempted again in other settlements. The Settlement Officers concerned should be thankful. If map correction is to be done it should be done with a complete field book and a khatauni, and complete map: the staff should be large enough to deal with the increased rapidity of work and it should be done under the supervision of the Settlement Officer, not by another officer prior to his arrival. The record has been made workable only at the cost of much trouble and worry. If the time and money devoted to the map correction had from the first been added to the settlement, complete remeasurement could have been done. As it was time supposed to be given to other things was devoted to constant correction of the record. If the jamabandis and the maps had been accepted just as they were when Rai Sahib Hira Singh had finished them they would have been a bad record of rights. I am glad the Gujrat system will not be adopted again, and I can only give it my heartfelt condemnation.

23. In the villages which have been measured during the course of settlement operations proper, the following methods have been adopted:—

Other systems of measurement: improved map correction.

- (1) Remeasurement in riverain villages on data given by the Survey Department.

- (2) Killabandi.
- (3) Complete remeasurement.
- (4) A combination of (1) and (2) with map correction.

To deal first with the map correction. In nearly all the villages along the riverains, only the part subject to river action has been remeasured according to the method (2) which will be described below. The other part was done by map correction where the old map was found to be good enough. Similarly in the villages of the Bar, partly above and partly below the *nakka* or old high bank, the part below the *nakka* was subjected only to map correction. But in each case to make the maps of the village uniform I did the work on masavis instead of on long cloth: a complete field book was prepared, i.e., including the numbers unaltered by copying out the old entry so that the series is complete; a *khatauni* was made for the whole village and a genealogical tree was made for the whole village, and as much care was spent on comparing the record with the old papers as was necessary. This work was done in 105 villages on the riverain and in 34 of the Bar villages, and in nine villages all three kinds of work were done.

24. In the riverain villages new measurements were made by the help of scientifically accurate data. The Survey Department laid out traverse points (*shanda*) at short intervals on either side of village boundaries, and also dotted them about the villages in both the area liable to diluvion and the firm land. The points were marked on masavis, which were supplied in a series indexed and numbered for each section of work done. In the *kacha* part, that subject to river action, the patwaris plotted in the village boundaries, fixing them in relation to the survey marks. Then the inside of each village was filled in by copying the old map with subsequent changes due to the fixing of a boundary. The copying was done in pencil, and the map was adjusted to the area between the village boundaries by distributing small discrepancies of excess or defect, with the aid of the intermediate survey marks, which could be kept in their proper position with regard to any permanent features. Round the survey marks the patwari had mapped in several fields accurately on the spot before the copy of the old map was made. It is thus seen that the system is not really measurement of existing fields. Down in a river bed it is very easy for a villager to mistake his field. Apart from an occasional individual malcontent the villagers do not want to encroach on one another's fields, but to know which are their own fields. This is all the more necessary since the passing of Act I of 1899. Now land which is submerged does not necessarily become village common land. In nearly all villages it remains the property of the individual, and he wishes to find it when the river recedes. The system, therefore, is to fix his fields on the map in exact relation to points fixed or which can be fixed, and by measurement to mark these out on the ground. Then at any time from the points on the firm land and on the higher parts of the *kacha* portion other survey marks can be reconstructed and a man's field found. But fields previously shown as *shamilat* were now re-measured according to actual possession. The men readily acquiesced in the system, and in all the villages as each field was marked out the men put up little marks and noted their location from the nearest survey marks. The work has been well done and should be found good when tested by practice. The work of the Survey Department was very valuable. The number of villages entirely measured by this method was 77. Most villages had an area which was completed by map correction of the more accurate kind done under the supervision of the settlement staff. In some villages where the firm part was on different scale from the 40 karams adopted in the *kacha* part it was remeasured. In any case the two parts of the village fit together properly because the survey marks extend into both.

25. *Killabandi*.—It is scarcely necessary to describe the whole process of killabandi. There is an excellent description of the procedure in paragraphs

23 to 32 of Mr. I. C. Chandu Lal's Final Report on the Settlement of the Wazirabad, Gujranwala, and Sharakpur tahsils of the Gujranwala District, and

since that report was written the subject has been dealt with in Appendix XIV of the Settlement Manual. Still as the subject is important it is well to note the procedure adopted in this district. The part of the district measured by this system was the Gojar Circle of the Kharian tahsil within the irrigation boundary and the Bar of Phalia (including the area transferred from Shahpur) in all the area above the *nakka* or old high bank. So 204 whole villages and parts of 58 were measured. The tract had been marked out into rectangles of 25 acres each under the control of Mr. I. C. Chandu Lal, Settlement Officer of Gujranwala, and small stone pillars had been put down at the corner of each rectangle. The work had largely been done in uncultivated land, but on the whole was accurate. The measurements of each rectangle were 200 karams by 180, that is, 1,100 by 990 feet. For killabandi it was necessary to split up each rectangle into 25 smaller ones, the corners of which are marked with a peg or *killa*, by dividing the sides of the original rectangles into 5 parts: these are then connected across the rectangles by lines, and the intersecting points are marked. All the killas were laid down on the ground first, before any re-partition was attempted. This was more economical in money as it enabled the chainmen and flagmen to be employed continuously and then dismissed, and the villagers had the new proposed field boundaries before their eyes, before any adjustments took place. In order to lay still more stress on this and to keep the lines from being obliterated before the re-adjustment could be done, men were induced to make ridges (of the kind ordinarily used in cultivation) on all killa lines in cultivated land and also in uncultivated land. The latter was an improvement on the instructions in the Settlement Manual but I found it very useful. The killa points had then to be shown on the old map and the killa lines reproduced on the old map by green lines so that it could be seen at a glance how the old and new fields fitted in. As in Gujranwala in estates where the old maps were amended ones, the work was difficult and the resulting killas on the map were not rectangles, but it is necessary to show the position of each killa point in its proper place in every field on the old map.

Meantime the officials prepared in each village the file by which the men agreed to killabandi, and accepted the method of re-partition to be adopted. This was almost invariably that each man should get the same amount as before of each class of land, and as far as possible each killa should be given to the man who owned most of it before. This method of re-partition was sent to the Extra Assistant Settlement Officer for sanction, and the Naib Tahsildars sanctioned a mutation declaring all the land of the estate to be joint.

Village boundaries were then moved on to killa lines keeping them straight as far as possible and trijunction pillars moved to the nearest practicable killa. Each of these files was decided by the Extra Assistant Settlement Officer, and contains a map showing the old boundary and the new one, and the statements of the owners. The roads were straightened, generally on to killa lines. At first the roads were put only on killa lines, but this was found to give lines in zigzag or steps, and finally where a road could not be put readily on to killa lines, it was kept straight on any alignment. In any case there must be a good many changes of roads to be made when irrigation settles down.

When the work on the ground was thus finished, the patwari proceeded to allot the killas and write up the field book and khataunis. In most cases the exact measurement showed an excess area over the previous rough measurement. The excess was either distributed according to each man's holding in the village, or sometimes included in the village common land. The patwari's re-allotment of the killas was followed by the delicate work of taking away killas or parts of killas from one holding and giving them to another, so that each man should have the area to which he was entitled, and the kind of land. In some villages the owners helped by practically re-distributing the land themselves, but usually they declined a task which might later lead to dissensions in the village, and left it to the settlement staff. The genealogical tree of the village was also written up and attested. All this procedure was checked as it went on, and after the patwari had done the work and worked out the totals to see

that all the land of the village had been accounted for, the papers were attested in turn by the kanungo and Naib Tahsildar, and after the Naib Tahsildar's check, copies of khataunis were given to the villagers. But my procedure differed from the Gujranwala one where (paragraph 30) the re-partition was practically decided by the Naib Tahsildar. In Gujrat the Tahsildar made a check, and after the hearing of objections in the village the final partition being a partition under section 122 of the Land Revenue Act was sanctioned by the Extra Assistant Settlement Officer, as being an Assistant Collector of the 1st grade. The mutation of the re-partition is almost a jamabandi in itself. When it had been finally disposed of, the jamabandi was written up and corrected copies of khataunis given to the villagers. By the time this stage was reached the khataunis had been corrected several times and the possession of the various fields mostly taken by their ultimate owners. In some cases the khasra girdawari shows differences, but mostly of tenancies and it was considered simpler and safer to write up the jamabandis from the khataunis without incorporating all the entries of the khasra girdawari. Where the record is so much changed the simpler procedure is better. For the same reason exchanges were not usually encouraged or recorded unless possession had actually passed. The whole effort has been to put existing holdings on to killa lines. Exchanges are much better left till the actual lines of water-courses and other considerations show where an exchange is desirable. Partitions have mostly been postponed for the same reason, and they can be much more easily and accurately done when killabandi is finished and irrigation begins.

The final result is good and its correctness may be shown by the fact that practically every holding has its correct area, differing if at all by but a marla or two. Very few differences are more than a kanal. The number of disputes which passed through the successive stages till they came to the Settlement Officer for decision were remarkably few, and the staff deserve great credit for their tact and patience. The record is good and neat. The map should require much less trouble in maintenance than maps of the old kind but only after the first few years. The killabandi has been done before canal irrigation began in undeveloped barani land so the map will be liable to much alteration when distributaries, minors and water-courses have been dug, when old roads have been found unsuitable to new conditions and when new roads have been made. Besides water-courses following the contours of the country will cut off many corners of holdings and there will be numerous exchanges. Wells will be abandoned and the small fields round them will be amalgamated. Numbering should be done according to water-courses, but that was not possible before the water-courses existed. At the first revision of the settlement of this tract I anticipate considerable alterations in the killabandi map, but after that the map should be kept up to date easily.

26. Killabandi in Crown waste was of course easy and here allotment of land will be made along the lines of fields demarcated on the ground.

27. Complete remeasurement was done in 8 villages in the Phalia tahsil which are partly above and partly below the *nakka*; the villages are among those transferred from Shahpur. The previous measurement had been on the scale of 60 karams to the inch, and as the Bar part was measured by killabandi on the scale of 40 karams, the Hithar part was remeasured to correspond. One village on the skirt of the Pabbi hills was re-measured by triangulation.

28. The unit of measurement throughout the district is that used in the north of the Punjab—a karam of 66 inches. A square karam is one sarsahi, though the term is seldom used. An area 3 karams square is a marla. 20 marlas are equal to one kanal, 8 kanals to a ghumao, and the ghumao is equal to one English acre. Four kanals make a bigha, which is thus half an acre.

The scale of measurement is in all villages remeasured either by Captain Davies at last settlement, or at the present settlement 40 karams or 220 feet to the inch. But all villages which had their maps revised by Captain Davies and again by Rai Sahib Hira Singh before my arrival still have maps on the scale of 50 karams. There are 536 such villages. In the villages transferred from Shahpur there are still eleven villages with maps on a scale of 60 karams. The maps were revised by Rai Sahib Hira Singh, and have been kept without further change.

29. Three maps of each village have been prepared in order to give one copy for the Sadr Kanungo, with the settlement record : one copy in the tahsil, and one copy with the patwari. In the case of villages whose map correction was done by Rai Sahib Hira Singh, the original copy on long cloth on which the actual map correction was done, is with the jamabandi in the District Revenue Record Room. There is a copy on tracing cloth in the tahsil and a copy on long cloth for use in girdawari with the patwari. In all other parts of the district where maps were made on mapping sheets (*masavi*) the original is stored in the head-quarters Revenue Record Room. There is a copy in the tahsil and the patwari has a copy on cloth. Officers of the Canal Department have taken for the use of that Department a copy of the patwari's map though it was unfortunate that they wanted to copy out most of the maps while they were being copied out for settlement purposes also.

30. Fresh copies of maps of all the three tahsils were made and can be sent to be printed. Delay occurred in sending them because for sometime there was a proposal under consideration to alter the boundaries of the tahsils, but that proposal has been postponed till the end of the war.

31. The record-of-rights now filed contains the following papers :—

- (a) A preliminary proceeding citing the notification of the Local Government sanctioning the resettlement, and giving an index of the papers following.
- (b) The field map.
- (c) The genealogical table of the owners. This has been drawn up on a continuous sheet of paper for each village, and for every village has now been made to show 4 generations from the present owners. The abbreviated genealogical tree prepared by Rai Sahib Hira Singh in the villages under map correction is with his jamabandi. The new genealogical tree is with the second jamabandi made under the supervision of the settlement staff.
- (d) An index of field numbers and holdings.
- (e) *The jamabandi*.—The preparation of it in different areas has been described.
- (f) *Statement of rights in wells*.—This is more complete than the one of the previous settlement by the addition of the ownership of the actual well.
- (g) *Statement of revenue assignments*.—Complete up to the date of the making of the jamabandi. But in cases referred for orders the old entry is repeated and is corrected later if necessary.
- (h) *The village administration paper*.—Attested and revised by the Extra Assistant Settlement Officer according to rule. The copy in the jamabandi is a fair copy signed by him.
- (i) *Mutations sanctioned since the last quadrennial attestation*.—In some cases where they are numerous they form a separate volume.
- (j) The order of the Settlement Officer determining the assessment with details such as deferred assessments, protective leases, revenue assignments, zaildars' dues and instalments.

- (k) The order of the Settlement Officer determining the distribution of the revenue giving the former and present methods.

32. New village note-books have been started in each estate from the year in which the new demand was introduced.
Village and circle note-books.

New abstract note-books have been prepared in accordance with Standing Order No. 24, paragraph 7. They now contain—

- (a) a sketch map of each village ;
- (b) a table containing the chief statistics which were used by me for the assessment of the village ;
- (c) a typed copy of the inspection note recorded by Captain Davies at last settlement, and of his orders on the new assessment and methods of distribution ;
- (d) a typed copy of my own inspection notes and orders on assessment, and method of distribution (my original notes written usually in the village were not considered tidy enough to be bound, but all have been bound separately, and filed for reference) ;
- (e) a revised form for entering the principal statistics for the ensuing period of settlement ;
- (f) some blank pages for future notes.

These books will be kept by the Sadr Kanungo, and if they are properly maintained should be of use.

33. Since last settlement fixed boundaries have been laid down on the Chenab and Jhelum rivers in accordance with Act I of 1899, and as these were recently laid, there have been few disputes, and the boundaries are now accurately shown on the new maps. They can at any time be reconstructed from the survey points on firm ground which have been marked by small stone pillars in each village or group of villages. No other delimitation of outer boundaries of the district has been made. With regard to the boundaries of particular villages, particular discrepancies have been rectified, and in the *killabandi* area all village boundaries with other villages under *killabandi* have been moved on to the lines of *killas*.
Boundaries.

34. The existing tri-junction pillars were in a bad state of repair and have been replaced in almost the whole district by substantial stone pillars measuring 3 by 1½ by 1½ feet. 3,077 such pillars were delivered in the villages at a cost of Rs. 2-10-0 each, the price being recovered from the land-owners.
Tri-junction pillars.

35. The number of mutations attested during the operations of the settlement was very great. Mutation work in a district of small holdings is always heavy and between settlements mutation work has been neglected, easy cases being disposed of, but difficult ones repeatedly left. From October 1910 when Rai Sahib Hira Singh began, to 30th September 1912, the number decided was—
Mutations and case work.

Gujrat	...	...	...	...	...	39,421
Kharian	...	...	...	...	...	31,478
Phalia	...	...	...	...	...	13,848
Total						84,747

and from 1st October 1912 to the 31st March 1916, which practically represents the whole period of settlement, the number was—

Gujrat	...	...	...	...	...	54,567
Kharian	...	...	...	...	...	45,204
Phalia	...	...	...	...	...	37,272
Total						137,043

The quality of mutation work done during settlement was on the whole good. But the number attested after a new settlement *jamabandi* was ostensibly ready is a striking commentary on the correctness of the record and justification of the decision not to attempt the system of abbreviated map correction again.

The following cases were disposed of from 25th October 1912 to the 31st March 1916 :—

Criminal	...	...	...	62
Rent	...	...	...	3
Partition	...	...	...	1,634
Lambardari	...	...	...	845
Patwari and kanungos	...	...	...	1,306
Boundary	...	...	...	3,630
Revenue assignments	...	...	...	633
Appeals.	...	...	...	374

The pending file contains mostly partition cases because those in the *killabandi* area have been left till *killabandi* is finished and irrigation begins, as partition will then be more easy and much more satisfactory.

36. When I took over charge on the 25th October 1912, there was no settlement staff because the orders of the Lieutenant-Governor (Sir Louis Dane) for an automatic increase of 25 per cent., had only just been cancelled (see paragraph 38). When orders to conduct the settlement under the ordinary procedure were received I had to collect staff both for field and office. It can be seen in settlement reports of other districts that even when arrangements for collecting the staff have been made a settlement does not get into working order for six months. But according to the schedule I had to begin village inspections at once and to assess the Gujrat tahsil in the 1st year. The work done by Rai Sahib Hira Singh was really only the *jamabandi* which was defective in the ways I have already described. In addition to the extensive correction of the record the settlement staff had to prepare all the other papers detailed in paragraph 30. The village administration paper and statement of rights in wells and revenue assignments had all to be put in hand (Financial Commissioner's letter No. 3073, dated 16th April 1912). Numerous statistics are required before the preliminary report, required by paragraph 225 of the Settlement Manual, can be submitted or assessment even thought of. I had to start all this. At the same time I had to acquire some knowledge of the district and people, make arrangements to start riverain measurement work and *killabandi*. But if advantage was to be taken of the cold weather all these things must be begun early. According to the method being tried in Gujrat I could not have that year or so described in paragraph 426 of the Settlement Manual in which to learn something of the district and organise staff. The preliminaries were supposed to be finished, but unfortunately not by me. With a minimum of knowledge I had quickly to submit reports on prices, assessment circles and the selection of average years. The form in which the statistics were to be compiled had to be worked out and given to the staff, and as fast as they could be made out I followed them up by beginning my village inspections, and writing village notes. I had to inspect 554 villages in the cold weather. The Survey Department did their demarcation of the riverain of the Gujrat tahsil and the measurement of the riverain villages began, though naturally not till the cold weather was almost over as the Survey Department could not send *masavis* earlier. By April the work of laying out *killas* on the ground in Kharian and Phalia was begun, and this continued during the hot weather. At the end of July I submitted my Assessment Report on the Gujrat tahsil. Orders on it were not received till December 1913, and though I protested I was instructed to announce the revenue and distribute over holdings with

effect from kharif 1913. During the year the completion of the *jamabandis* had brought a great many mutations on to the record. I should have liked to make a new *jamabandi* in many villages to form a settlement record, but there was no time for that. With practically 50,000 mutations to incorporate the preparation of *bachh* papers was very difficult, and their correct compilation required more time than would be taken in doing the *bachh* on a clear and correct record. However in compliance with the orders of the Financial Commissioner the work was done. But the collection of the instalment was delayed and the papers were not actually completed till later.

1913-14.—In the meantime I had from the beginning of the cold weather, that is, from October 1913, begun the village inspection of the Kharian tahsil. The Survey Department did the demarcation of the Jhelum riverain in the Kharian and Phalia tahsils and sent *masavis*, and again the settlement staff were not able to begin work till the floods were almost coming down. In the *killabandi* area laying out of *killas* was completed, and the readjustment began. In the hot weather I submitted my assessment report of the Kharian tahsil and in Kharian, apart from the villages, where a complete new *jamabandi* was being made (on the riverain and in the *killabandi* area) I had time to correct a great many *jamabandis* and to complete a new quadrennial *jamabandi* in 203 villages, and under the orders of the Financial Commissioner the new ones were made the settlement *jamabandis*. In Phalia too the work of correcting Rai Sahib Hira Singh's *jamabandis* took up a lot of time. Innumerable mistakes were corrected and the two copies checked. In 75 villages I had a new *jamabandi* made under the usual instructions for a quadrennial *jamabandi*.

1914-15.—In October 1914 I began the village inspections of the villages of Phalia but did not need to write village notes on all, as in the Bar the comparison of previous statistics would have been waste of time when conditions were to be completely changed by canal irrigation. The kharif had been so bad that the introduction of the new demand in Kharian was postponed till rabi 1915. This gave more time for the announcements and distribution over holdings and the work was better done. *Killabandi* work was pushed on but in the beginning in 1915 great hindrance was found from a severe epidemic of plague. The mortality was great. Owners left the villages and attestation of records came to a standstill, and the staff could not go into many villages to carry on their work. Later when the epidemic abated and the staff settled down even in the hot weather to make up for lost time, they were hindered by a season of exceptional heat and drought. Detailed check of amended field boundaries was difficult on a hot day several miles from the nearest well. During the hot weather I submitted an assessment report on the Phalia tahsil. In the Hithar circles of Phalia I had other *jamabandis* prepared.

During the cold weather the Hithar circles of Phalia and part of the Nahri of Gujrat was laid out into rectangles for the benefit of the Canal Department, who find them useful for levelling. But no *killabandi* was done.

1915-16.—In the cold weather though village inspections were no longer necessary I found that in the new *jamabandis* of the Hithar circles of Phalia which were by the orders of the Financial Commissioner to be the settlement record, there was a large difference in the *chahi* figures from those previously reported and the matter was investigated on the spot. Orders were received on the Phalia Assessment Report in February, and announcements made. The rest of the year was spent in completing the records in Phalia and in winding up the settlement.

During the whole period too, in addition to the usual miscellaneous work of the settlement, my staff had to spend a good deal of time in preparing papers in the interest of Canal Department. Land acquisition papers were always in hand and could not be done without the help of the patwari, and towards the end of the settlement the village papers and maps were needed by the Canal Department to copy.

37. With regard to the measurement and other work, it is necessary to say a word about the staff. They have worked well under difficulties to make a new record. But the Phalia tahsil has always been unpopular and every time I have transferred men there, I have had to be prepared for numerous applications for leave or transfer, or the usual grounds of sick relatives, impending marriages and other private affairs. Further I have not been in a position to reward my staff. Owing to the excess number in the lists of Naib Tahsildars and kanungos reversions rather than promotions have been the rule and no patwari could be promoted to kanungo. Work naturally did not get on so well as it would in a popular district with an even flow of promotion. Individual inefficients have had to be punished, but taking altogether I think the staff deserves credit.

CHAPTER IV.—REVISION OF THE ASSESSMENT.

38. The previous assessment of the district had been sanctioned in Punjab Government letter No. 333, dated 9th July 1894, for a term of 20 years, reckoning in each tahsil from the harvest in which the new demand was introduced. In anticipation of the close of the term a forecast report for the new settlement was prepared and submitted by the Deputy Commissioner of Gujrat in his letter No. 400, dated 22nd December 1909. The probable new assessment was estimated to give an increase of 25 per cent. The Commissioner thought 21½ per cent. would be a fair increase and the Settlement Commissioner agreed. But the Settlement Commissioner pointed out that the revision of assessment ought to coincide with the advent of canal irrigation, so the beginning of settlement operations was postponed and proposals for the new assessment were sent up in Financial Commissioner's letter No. 270, dated 28th March 1912, and a general re-assessment of the district was authorised in Punjab Government notification No. 1703, dated 5th August 1912, and a special revision of the record-of-rights in notification No. 1704, of the same date. But in directing a re-assessment the Local Government ordered that the work be done on special lines as shown in Punjab Government letter No. 960, dated 2nd July 1912, and No. 1701 of the 5th August 1912. The usual assessment reports were to be avoided, and if three-fourths of the villages in any assessment circle agreed, an automatic increase of 25 per cent. should be made in each village. If any villages objected they should be assessed on their merits, and the new demand would be at half-assets. In the case of tracts to be irrigated by the Upper Jhelum Canal the owners were to be informed that fluctuating rates might later be substituted. Before, however, the Settlement Officer had arrived to carry out the orders, the Government of India in letter No. 1157, dated 3rd October 1912, from the Revenue Department, looked upon the orders issued by the Lieutenant-Governor (Sir Louis Dane), as unsound in principle, and likely to lead to difficulties in practice, and requested that steps be taken to abandon the scheme proposed and to cancel definitely the orders conveyed in paragraph 2 of Punjab Government letter No. 960, dated 2nd July 1912. The Local Government therefore in letter No. 168, dated 6th November 1912, directed that the settlement should proceed on the lines laid down in the Financial Commissioner's letter No. 270, dated 28th March 1912, and be carried out in the usual manner.

39. The theoretical demand therefore was to be according to rule, half the net-assets of the owner of the land : and the assets are ascertained on the assumption that all the land is let out by the landlord to tenants-at-will paying the competition rents of the tract. It is desirable to explain the method of the calculation. The first thing is to mark out the tract into homogeneous circles, each of which may be fairly taken as a unit for the purpose of assessment. The different classes of soil which can pay varying rates of revenue must be specified. If there are cash rents the calculation of the Government cash demand is easy, for after making some allowance for rents not collected, half the rent which the owner finally receives is the theoretical Government demand. If the rents are paid in kind several factors must be considered in order to find out the total value of the crop, and the share which the landlord

may get. The harvested crop is recorded each year and an average is taken of series of years selected with the approval of the Financial Commissioner. The yield of each crop is ascertained by local enquiry. The prices are sanctioned by the Financial Commissioner as being those which a cultivator may be expected to get in his village at the time when he pays his revenue. From these three factors can be found the total value of the average crop. In the village registers can be seen the area under tenancies on which the landlord takes rents of varying proportion (half, one-third, one-fourth, etc). So the landlord's share of the total produce can be seen. After deducting certain customary dues, half his receipts represents the theoretical revenue. But such calculations must be taken with caution because the details are not exact.

40. The orders regarding assessment circles will be found in the respective assessment reports. In the Assessment circles, Gujrat and Kharian tahsils it was neces-

sary to cut off a part which would receive canal irrigation and make a separate circle. In each case the new circle was the inferior part of a previous large circle and consideration of the statistics shows that the previous circles had been too large. For, if a circle is so big as to lack homogeneity, it is difficult to assess fairly and the recorded circle figures are no guide to the Settlement Officer's procedure, or correct indication of what has been done. In the Phalia tahsil the transference since last settlement of some villages from the Shahpur District made it necessary to obtain sanction to a tentative classification into six circles, and a re-arrangement into four is being made after the completion of assessment. The latter method is more satisfactory. The classification can be made on fuller knowledge and the assessment statistics are not needlessly complicated. The circles as finally constituted are—

<i>Gujrat.</i>	<i>Kharian.</i>	<i>Phalia.</i>
Hithar.	Bet Jhelum.	Bet Jhelum.
Jatatar.	Pabbi.	Bar.
Nahri.	Maira.	Hithar east.
Bulandi.	Gojar.	Hithar west.

41. The classification of soils is of great importance for the proper determination and distribution of the demand ; and is normally one of the chief items

in the preliminary work of a settlement. As *chahi* is usually assessed at about double the rate of *barani* it is necessary to know its area exactly. In the Gujrat tahsil the well areas are small, and though I found the areas doubtful the discrepancy was not so much as to affect the accuracy of the settlement unduly. In Kharian too the *chahi* area is negligible. But in the Phalia tahsil the making of a fresh *jamabandi* between the compilation of the statistics for my report and the receipt of the orders of Government revealed a large discrepancy which necessitated revision of the assessment. Apart from this there is also the question of the number of classes of soil which should be recorded. At the previous settlement the only soils recorded were *chahi* (irrigated by wells), *sailab* (kept moist by a river or stream), and *barani* (dependent on rain alone). *Chahi* land is that which in the ordinary course of husbandry is from time to time irrigated by a well. The *patwari* is instructed that waterings for two crops out of eight justify the classification of land as *chahi*, provided the means of irrigation be still available. So it is seen that some *chahi* land is that which has been watered twice other that which has been watered in four or even eight crops. If the record is incorrectly checked, it may not have been watered at all. But the entry is important because the estimate of revenue based on crops is finally recorded against the land. In paragraph 67 of his final report of the settlement of 1893 Captain Davies proposed to discontinue the entry of *chahi* land, and to distribute revenue on the average area harvested with the aid of irrigation. *Sailab* is land regularly kept moist by a river or stream. That on the river bank is liable to much variation : a deposit of silt makes excellent soil, which next year may be spoilt by a deposit of sand. In the Gujrat and Kharian tahsils the land in the bed of the hill streams is often kept moist, not so much by the stream (which often flows only a few hours) but by the drainage from the higher land. This land is not consistently classified, but is certainly more moist than ordinary land on the

level and even if it be not really *sailab* land it is above the average of the *barani*.

Barani soil is that which offers many variations, from very good to very bad. In nearly all villages the part round the *abadi* gets more manure and is more readily cultivated and has good crops: it ought to pay a higher revenue. Apart from this the district by its geographical position has many kinds of soil: the broken country on the Jammu border is sandy and stony; the middle of the plateau is excellent loam, the beds of drainages are of hard clay: the old river-bed (as in the Hithar circles of Phalia) has a sub-soil of sand. All these have been classed for revenue purposes as *barani* and the difference of quality has been left in the assessment to the observation of the Settlement Officer. The classification is now long established and the people do not ordinarily use any other in the distribution of revenue. But in the villages of Gujrat and Kharian where the slopes to a stream give both high land and low the people often class the high and low separately. I think that at next settlement it will be worth while to distinguish between at least good and bad *barani*. The people distinguish the following:—

- (1) *Maira*, a loam. (2) *Walchi*, the same but rather more sandy.
 (3) *Rethi*, very sandy. (4) *Rohi*, stiff clay. (5) *Niain*, the manured land round the village habitation. (6) *Chhamb*, low-lying land. Further the use of the word *sailab* varies. In Gujrat it is usually given to low-lying land, but in Phalia it is given to ordinary land, dependent on rain, as distinguished from *chahi*.

42. The average matured area was taken on a period of years which differed for each tahsil. In Gujrat the period was of ten years, from *kharif* 1901 to *rabi* 1911. In Kharian the period was of 5 years from *kharif* 1908 to *rabi* 1913. In Phalia the period was of 4 years, from *kharif* 1909 to *rabi* 1914, omitting the year *kharif* 1911—*rabi* 1912.

43. The yields assumed for the various crops in the various assessment circles form a long list, and the details are to be found in the three assessment reports: The assumption of yields is most speculative. Those in my first report of the Gujrat tahsil were considered high by the Financial Commissioner and the Lieutenant-Governor, but in the other two tahsils they were approved.

44. The sanctioned commutation prices in annas per maund or rupees per acre were as under—

Prices.

Wheat	...	...	...	...	...	36
Barley	...	...	...	...	...	22
Gram	...	...	...	...	...	28
Wheat gram	...	...	...	...	...	31
Massar	...	...	...	...	...	24
Tobacco	...	...	...	...	...	70
Toria	...	...	...	...	...	52
Linseed	...	...	...	...	...	64
Sarshaf	...	...	...	...	...	50
Taramira	...	...	...	...	...	48
Rice	...	...	...	...	...	32
Maize	...	...	...	...	...	28
Jowar	...	...	...	...	...	27
Bajra	...	...	...	...	...	29
Mong	...	...	...	...	...	32
Moth	...	...	...	...	...	28
Mash	...	...	...	...	...	40
Til	...	...	...	...	...	64
Cotton	...	...	...	...	...	88
Other food crops	...	...	...	...	...	24
Sugarcane	...	...	...	...	Rs. 100	
San	...	...	...	...	Rs. 16	
Fodder crops	...	...	...	...	Rs. 8	
Fruit and vegetables	...	...	...	...	Rs. 20	

The increase on the prices assumed at last settlement was 58 per cent. or 51 per cent. according to the method of calculation employed. The prices have since gone up a great deal, and though the great war makes everything uncertain, it is very unlikely that in the future prices will come down to the level of the prices assumed.

45. Various menials receive a share of the crop of each holding, either for services rendered to the whole village, or for personal services. The

Deductions for village menials.

estimate of the value of these deductions is speculative as the rates vary in different parts. The general tendency is to give more than before, because without the menials agricultural operations are not easy. The owner of a small holding can do his own reaping or winnowing, but he cannot repair his own implements or well gear. The deductions I found reasonable varied from 10 to 15 per cent. in the Gujrat tahsil, 8 to 12 per cent. in Kharian and Phalia.

46. The landlord's share of the gross produce depends on the normal proportion which he takes when the rent is a fraction of the produce. In

Landlord's share of produce.

Gujrat and Kharian it is mostly a half except in the poorer circles, Nahri and Gojar where one-third is frequent. In Phalia the rate of one-third is the common rate with quarter or even one-fifth on rice, sugarcane and tobacco. The exception is the more prosperous circle of the Bet Jhelum where a considerable area is on half batai or two-fifths. The custom is that with a half share the landlord also takes the same share of straw of the better crops but not with the smaller fractions.

47. Where cash rents are common, they afford a very valuable check on the calculations from kind rents.

Cash rents.

But in none of the three tahsils of the district are cash rents taken on any representative area or by a method which would show the true value. They can be left out of account.

48. The final half-net assets as calculated by me and accepted by the Financial Commissioner are given below, with the sanctioned assessment and the

Comparison with half-net assets.

percentage of the latter on the former in circles where a fixed assessment has been announced :—

Tahsil.	Circle.	Previous demand.	Half-net assets.	Sanctioned assessment.	Percentage of 5 on 4.
		Rs.	Rs.	Rs.	
Gujrat ...	Hithar ...	90,488	2,59,038	1,11,000	48
	Jatatar ...	62,906	1,63,330	80,000	44
	Nahri ...	63,845	1,54,307	71,000	46
	Bulandi ...	1,31,637	4,30,506	1,76,000	41
Kharian ...	Bet Jhelum ...	17,405	54,000	21,000	39
	Pabbi ...	33,044	1,11,179	44,000	40
	Maira ...	1,27,140	3,85,662	1,67,000	43
Phalia ...	Bet Jhelum ...	29,071	70,272	37,000	53
	Hithar East ...	1,23,253	...	1,46,000	...

It will be seen that Government has taken less than half the amount which it could claim if the half-net assets be accepted as correctly estimated. In the Gujrat tahsil the Lieutenant-Governor thought the estimate rather too high, but even if some reduction be made from the half-net assets of that circle the percentage actually sanctioned is certainly less than 50. As the Hithar East is a new circle, separate figures in columns 4 and 6 cannot be given.

49. In anticipation of irrigation from the Upper Jhelum Canal, rates of canal revenue on irrigated land had to be proposed. It was difficult because there is no basis now available, except the rates on land irrigated from wells, and there is the complication of very varying intensities of irrigation, 80 per cent. perennial, 50 per cent. perennial, 30 per cent. perennial, 25 per cent. *kharif*, 20 per cent. *kharif*, requiring different methods of assessment. Where irrigation is as much as 80 per cent. perennial a fluctuating assessment is required. Where it is 20 or 25 per cent. *kharif* a fixed assessment with a fluctuating canal rate is preferable because it interferes least with the 75 per cent. not irrigated. The method sanctioned has been that where irrigation will be 80 or 50 per cent., a fluctuating assessment has been imposed on all classes of cultivation. Where it has been 30 or 25 the method sanctioned differs according to the proportion of *chahi*. Where the tract is well developed and there is little chance of further development a fixed assessment and a fluctuating water-advantage rate was prescribed, but where there is a large area of *barani* or *banjar* soil suitable for canal irrigation a fluctuating water-advantage rate is inappropriate as it gives too little of the increase to Government. However the Lieutenant-Governor ordered that in both the Gujrat and Phalia tahsils the villagers should have the option of a fully fluctuating assessment. The villagers took advantage of this in some villages where part was to be under fluctuating assessment already, but mostly the option was refused. In the Gujrat tahsil the proportion of land recorded as uncultivated is only about 10 per cent. and the rate of water-advantage rate is Re. 1-8-0, so the decision of the people will probably result in a gain to Government. In the Hithar East of Phalia the land still shown as *banjar* is in most cases the poorer part near the creeks of the old river-bed which was the origin of this circle. So except in a few villages the *banjar* which will get a very light canal assessment is not the land most worth cultivating. In this circle the water-advantage rate is one rupee per acre in the *kharif*, and *rabi* waterings are exempt. Some villages in both Gujrat and Phalia have refused canal water, but if later they are irrigated the water-advantage rate of the circle can be imposed. The water-rates will probably be those of the Upper Chenab Canal, but I hope that a different zone will be sanctioned for the *kharif* channels which are in inferior soil.

50. The assessment of each tahsil will now be noted in detail.—

Gujrat Hithar.

Gujrat Tahsil.

					Rs.
Gujrat Hithar—					
Old demand	...	...	...	...	90,438
Sanctioned new assessment	...	...	...	...	1,11,000
Imposed	...	...	...	...	1,11,249
Increase	...	...	...	...	23 per cent.
Soil rates on cultivated area—					Rs. A. P.
Chahi	...	...	...	...	3 0 0
Sailab	...	...	...	...	2 0 0
Barani	...	...	...	...	1 2 0
Crop rates on average harvested area—					
Chahi	...	...	...	...	2 14 0
Sailab	...	...	...	...	1 12 0
Barani	...	...	...	...	1 8 0

As this is a riverain circle the amount sanctioned was imposed on the figures of revised area according to the new measurements which were not complete when the assessment report was written. The circle is a good one and the assessment is not excessive. Some of the villages at the western end may possibly get canal water but apparently the distributary which would command them is not being made. A fluctuating water-advantage rate of Re. 1-8-0 per acre has been announced in one village, and the same will be applied to other villages which finally do obtain canal irrigation.

When the Bhimbar stream was diverted into the canal and certain land was no longer flooded a remission of assessment was made from kharif 1914, amounting to Rs. 1,131.

51.

Gujrat Jatatar.

					Rs.
Gujrat Jatatar—					
Old demand	...	...	...	...	62,906
Sanctioned new assessment	...	...	...	...	80,000
Imposed	...	...	...	...	79,955
Increase	...	...	...	...	27 per cent.
Soil rates on cultivated area—					Rs. A. P.
Chahi	...	...	...	...	2 14 0
Sailab	...	...	...	...	1 13 0
Barani	...	...	...	...	1 7 0
Crop rates on average harvested area—					
Chahi	...	...	...	...	2 13 0
Sailab	...	...	...	...	1 12 0
Barani	...	...	...	...	1 7 0

The circle is mostly good but there is a part to the west between the railway and the canal which has the least rainfall and was already assessed rather high, but as little increase has been taken here, it should now be secure.

52.

Gujrat Nahri.

					Rs.
Gujrat Nahri—					
Old demand	...	...	...	...	63,845
Sanctioned new assessment	...	...	...	...	71,000
Imposed	...	...	...	...	71,140
Increase	...	...	...	...	11 per cent.
Soil rates on cultivated area—					Rs. A. P.
Chahi	...	...	...	...	1 14 0
Sailab	...	...	...	...	1 8 0
Barani	...	...	...	...	0 14 0
Crop rates on average harvested area—					
Chahi	...	...	...	...	2 0 0
Sailab	...	...	...	...	1 10 0
Barani	...	...	...	...	1 1 0

The circle has had a varied history as it comprised the old Bhimbar circle which used to get flooding from the Bhimbar and in consequence a deposit of clay was left, and when the Bhimbar changed its course this soil was hard to work. In other parts the stream left a deposit of sand. The characteristics of the circle were rather obscured in 1892 by its inclusion in the large Jatatar Circle, and a heavy increase was taken about 40 per cent. compared with about 22 in the other circles. It has required suspensions and remissions much more than any other part of the Gujrat tahsil, and has now rightly been more leniently treated, the increase being small. When canal irrigation begins at 25 or 20 per cent. of the area for kharif with first and last waterings for rabi on half that area the fixed assessment will be maintained but each acre irrigated in the kharif will pay a water-advantage rate of Re. 1-8-0. Nothing will be paid in the rabi. The water-advantage rate is the same in all villages, as the men preferred not to have it differentiated. In nineteen villages which will get a small area irrigated from a perennial channel 30 per cent., Government at first ordered that a fluctuating assessment be imposed at the Kharian rates. But as only parts of villages were concerned, and the people preferred to retain their fixed assessment and pay water-advantage rate, that was approved by Government, and a suggested

transfer of these villages to the Kharian tahsil was deferred till the results of irrigation are seen (Financial Commissioners' letter No. 3011, dated 27th April 1916). Water-rates will be paid in both harvests according to the sanctioned schedule which will I hope have a different rate for the perennial channels in the Bar and for the kharif channels in the inferior soil of the Hithar.

When the Bhinbar stream was finally diverted into the canal, and certain land was no longer flooded, a remission of assessment was made amounting to Rs. 1,180 from kharif 1914.

3.

Gujrat Bulandi.

Gujrat Bulandi—

	Rs.
Old demand	1,31,637
Sanctioned new assessment	1,76,000
Imposed	1,76,015
Increase	34 per cent.

Soil rates on cultivated area—

	Rs.	A.	P.
Chahi	2	6	0
Sailab	1	8	0
Barani	1	3	0

Crop rates on average harvested area—

Chahi	2	6	0
Sailab	1	8	0
Barani	1	3	6

The circle is a large one and occupies almost half the tahsil, and naturally contains land of various kinds. It was at previous settlements split up into smaller circles and as I think more conveniently for the purposes of assessment. The part to the east is the high uneven ground towards Jammu, sandy and stony to the edge of the rivers Tavi and Chenab where is some land regularly flooded by these rivers. The western half is more level soil and is of a firm loam which produces good crops, but it is much cut up by the sandy beds of ravines which do much damage. The rainfall is good and crops seldom fail from drought, or at any rate there is scarcely ever a succession of bad seasons.

Kharian Tahsil.

54.

Kharian, Bet Jhelum.

Rs.

Kharian, Bet Jhelum—

Old demand	18,906
Sanctioned new assessment	21,000
Imposed	22,468
Increase	19 per cent.

Soil rates on cultivated area—

	Rs.	A.	P.
Chahi	2	6	0
Sailab	1	14	0
Barani	1	0	0

Crop rates on average harvested area—

Chahi	2	6	0
Sailab	2	0	0
Barani	1	0	6

As this is a riverain circle the area reported was changed when measurements were finished and the old demand was changed too. The sanctioned rates were therefore applied to the new area in order that the sum announced in each case should apply properly to the area in the settlement jamabandi.

Subsequent changes due to diluvion were calculated in the ordinary way. The final amount was a light assessment.

55.

Kharian Pabbi.

Kharian Pabbi—					Rs.
Old demand	...	...	...	...	33,044
Sanctioned new assessment	...	...	...	...	44,000
Imposed	...	...	...	...	41,920
					(on area excluding 5 villages)
Increase	...	...	...	...	37 per cent.

Soil rates on cultivated area—

					Rs. A. P.
Chahi	...	...	...	...	2 4 0
Barani	...	...	...	...	0 14 0

Crop rates on average harvested area—

Chahi	...	...	...	...	2 8 0
Barani	...	...	...	...	0 15 0

The circle is varied from infertile high land and stony slopes to fertile depressions among the hills. The assessment has always been light, and is still light: I found it quite easy in assessing to take rather more than the sanctioned sum, and am inclined to think now that the circle could bear a higher assessment. The quality of the soil is not much inferior to that of the Maira and the rainfall is better. The record of measurement among the more hilly parts is of doubtful accuracy.

56.

Kharian Maira.

Kharian Maira—					Rs.
Old demand	...	...	...	...	1,27,140
Sanctioned new assessment	...	...	...	...	1,67,000
Imposed	...	...	...	...	1,66,883
Increase	...	...	...	...	31 per cent.

Soil rates on cultivated area—

					Rs. A. P.
Chahi	...	...	...	...	2 0 0
Barani	...	...	...	...	1 3 0

Crop rates on average harvested area—

Chahi	...	...	...	...	2 8 0
Barani	...	...	...	...	1 3 6

The circle at previous settlements had been marked off into small circles, but all were combined in 1892 by Captain Davies into one large one. I think it was too large for it contained 399 villages of very varying characters. In such a large circle as this it is not possible for officers reviewing or passing orders on an assessment report to do so satisfactorily, and an undue amount of difference is left to the discretion of the Settlement Officer, whose work can then only be found in the village notes, and not in the assessment reports. The present circle is smaller but even then it comprises three markedly different tracts—the sandy stony part bordering on the Jammu State, the fertile valley of the Bhimbar and the dry part west of the Grand Trunk Road. Of these the Bhimbar valley is much the best and was assessed above rates: the other parts below.

57. The old demand was Rs. 50,652, but comparison cannot be made with the new demand, because this circle

Kharian Gojar.
(which in future will include 5 villages previously included in the Pabbi) is mostly under fluctuating assessment. The parts outside the canal boundary have been assessed at rates corresponding to neighbouring and similar villages of the Maira Circle and

seven villages which refused canal water have also been assessed to fixed revenue. The total is Rs. 9,800. For the rest the circle rates sanctioned were fluctuating as follows :—

						Rs. A. P.
Chahi	...	...	...	...	...	2 2 0
Nahri	...	...	...	...	...	2 4 0
Barani	...	...	...	...	...	1 2 0

The worst villages are those at the south-east bordering on the Gujrat tahsil as this is really a continuation of the *nakka* or old high bank of the river which is so important a feature in the villages of Phalia. These villages have been assessed lightly and good villages have been assessed above rates. The final result if calculated on the 50 per cent. which is to be irrigated, will give an excess over the sanctioned amount by about $1\frac{1}{2}$ per cent. The circle was previously badly off as it is the driest part of the Kharian tahsil and frequent suspensions had been required. It is now proposed to irrigate 50 per cent. and with a fluctuating assessment, the need for suspensions will disappear. The present assessment is a tentative one and the rates have only been roughly differentiated. The circle rates have been applied to most villages. Accurate differentiation can be done only when the result of canal irrigation has been seen.

Phalia Tahsil.

58.

Phalia, Bet Jhelum.

Phalia, Bet Jhelum--

					Rs.
Old demand					29,071
Sanctioned new assessment					37,000
Imposed	...	...	...	...	37,550
Increase	...	...	...	...	29 per cent.

Soil rates on cultivated area—

					Rs. A. P.
Chahi	...	...	...	...	2 10 0
Sailab	...	...	...	...	1 14 0
Barani	...	...	...	...	0 13 0

Crop rates on average harvested area—

Chahi	...	...	...	...	2 9 0
Sailab	...	...	...	...	1 12 0
Barani	...	...	...	...	0 13 0

As this is a riverain circle the area reported was changed before new measurements were done, and the revenue on this area was changed also. The sanctioned rates were applied to the new area in order that the sum announced in each case should apply properly to the area in the settlement *jamabandi*. Subsequent changes due to diluvion will be calculated in the ordinary way. The circle includes a little land south of the main line of the Lower Jhelum Canal which will be irrigated by the Upper Jhelum Canal. But in only three villages was it necessary to announce a canal assessment at fluctuating rates as the other villages refused canal water because the area commanded is sandy and gives quite good enough *barani* crops. The circle will in future be larger as the riverain villages transferred from Shahpur have been joined to them so that the whole riverain shall be in one circle.

59. The old demand was Rs. 80,189, but the statistics relating to the new demand cannot be given in a tabular form because the assessment from kharif 1916 will be almost all fluctuating. The Bar Circle is really in 3 parts—(a) the central plateau which will receive perennial irrigation; (b) the part below the *nakka* towards the Jhelum river which will receive 30 per cent. perennial irrigation; (c) the part below the *nakka* towards the Chenab which will get 30 per cent. perennial or 25 per cent. kharif irrigation according to the contours. The difficulty in assessment arose from the fact that the villages comprising (b) and (c) were also partly in (a). And the different intensities of irrigation were to be treated differently it was necessary to have more than one kind of assessment in a village.

The orders with regard to (a) are simple, the rates are fluctuating and are *nahri* Rs. 2-6-0, *chahi* Re. 1-12-0, *barani* Re. 1-0-0. As the present assessment is tentative and will probably be revised in 10 years the rates have been applied to most villages alike, but villages obviously below average or where there is any considerable proportion of land on the broken edges of the plateau, have been assessed below rates: obviously good villages have been assessed above rates. Usually the difference was made only in the *nahri* rate, but in three villages where the *chahi* was not of the normal bar kind, that was varied also, and in two villages which extend down to the river, the *chahi* rate was varied and on part of the area a fixed assessment was imposed.

In (b) and (c) the orders of the Financial Commissioner were that for 30 per cent. perennial irrigation a fixed assessment should be imposed with a fluctuating water advantage but that, where *chahi* was not considerable, full fluctuation at Bar rates might be adopted: for 25 per cent. kharif irrigation a fixed assessment and fluctuating water-advantage rate of Re. 1. The Lieutenant-Governor directed that the villagers should be allowed the option of full fluctuation.

In (b) the men mostly asked for full fluctuation, as they did not wish to have different systems in the same village. Three villages however elected for the double system and have a fixed assessment with fluctuating water-advantage rate in the part below the *nakka*. Three villages which cannot be irrigated have an assessment entirely fixed. Where the fluctuating assessment was given in the part below the *nakka*, the Bar rate were not appropriate for *chahi*. The Bar rate is Re. 1-12-0 fluctuating, while the fixed rate sanctioned for the lower part was Rs. 2 and the villages adjoin villages of the Bet Jhelum Circle where the circle rate for *chahi* is Rs. 2-10-0. In the part below the *nakka* I announced a *chahi* rate of Rs. 2-4-0 fluctuating in the villages. The area under a fixed assessment is *chahi* 1,608 acres, *sailab* 44 and *barani* 418, total 2,070, assessed at Rs. 3,630. In this area canal irrigation in one village will pay a water-advantage rate of Rs. 1-4-0 per acre.

In (c) the configuration of the country will make irrigation much more difficult. The lower area of the Bar villages is partly in a depression under the old high bank, partly on a ridge of sand which separates the depression from the Hithar Circle. In these villages the men nearly all asked for fixed assessment, only 6 out of 25 electing for a fluctuating assessment in the part below the high bank. These 25 villages are those which adjoin the new circle Hithar East (referred to in the next paragraph). The western villages which adjoin the new circle of the Hithar West were all given a fluctuating assessment so as to maintain uniformity. So out of the Bar villages in (c) under fixed assessment were 5,750 acres, *chahi*, and 4,583 *barani* on which I announced Rs. 12,270. Some of these villages should in future be included in the Hithar Circle. Proposals for the re-alignment of the boundary of the Bar and Hithar villages have been made, and approved of in Financial Commissioner's letter No. 26-S., dated 22nd May 1916.

60.

Phalia, Hithar East.

Phalia, Hithar East—

				Rs.
Old demand	...	...	...	1,23,253
Sanctioned new assessment	...	...	...	1,46,000
Imposed...	...	...	...	1,44,834
				(deducting area in Bar.)
Increase...	...	...	...	17 per cent.

Soil rates on cultivated area—

				Rs. A. P.
Chahi ...	...	...	...	1 13 0
Sailab ...	...	...	...	1 10 0
Barani...	...	...	...	0 10 0

Crop rate on average harvested area—

Chahi ...	...	...	...	2 1 0
Sailab ...	...	...	...	1 10 0
Barani ...	...	...	...	0 12 0

The circle was formed out of the eastern part of the old Hithar and Bet Chenab Circles as far as a line drawn roughly west of Kadirabad. The *chahi* and *barani* of old Bet Chenab was in no way different from that of the Hithar so the main difference was the addition of *sailab* and the circle become more compact for the real difference there is between east and west. The circle is an old river-bed as described in paragraph 1. It has a sandy sub-soil covered with a layer of silt of very varying thickness. Water is near the surface and wells are not hard to construct. But as the rain is deficient and variable the *barani* crops of the tract are not good, and well water is spread over a very large area. The statistics for the assessment of the circle were based on the records made by Rai Sahib Hira Singh before my arrival. But under the orders of the Financial Commissioner I made a quadrennial *jamabandi* for the whole circle. It was not possible to do any real check on the ground but the paper check of the *jamabandi* was much more thorough, and it was discovered that the *chahi* had been over-estimated by as much as 7,000 acres, and while the assessment report was still under the consideration of Government, a reference had to be made asking for a reduction in a proposed assessment. The sum finally sanctioned for this circle was Rs. 1,46,000. The village assessments were difficult because my tentative assessments had been based on one set of figures and I had later to revise them on the basis of another set. Some villages had a large drop in *chahi*, and it was found that if the new statistics were correct some were already over-assessed, and others could not fairly pay an increase. To have the statistics upset at the last moment was very disconcerting. The final assessment excluded an area of 1,724 acres in 5 villages which was above the *nakka* and so was assessed at fluctuating Bar rates. The rest was assessed to a fixed revenue of Rs. 1,44,834 which excluding the fluctuating area is about Rs. 550 less than the sanctioned sum. Under the orders on my report the villages to have canal irrigation 25 per cent. kharif were offered the option of a fully fluctuating assessment (at rates *chahi* Rs. 2, *sailab* Re. 1-8-0, *barani* Re. 1) but all refused. The canal assessment was announced in all villages alike, a rate of one rupee in kharif only on each acre irrigated. Nothing is to be paid as additional land revenue on land which gets first and last waterings for rabi. The limits of the circle will be changed as noted at the end of paragraph 59 by transferring 5 villages to the Bar and including 2 villages from the Bar.

61. The Phalia Hithar West Circle is composed of parts of the old Hithar and Bet Chenab Circles of the Phalia tahsil with the villages of the Chenab Circle of the

Phalia, Hithar West.

Bhera tahsil which had been transferred from Shahpur. The Phalia villages previously had a fixed assessment. The Chenab villages since 1910-11 have had a fluctuating assessment. The fixed assessment imposed by Mr. J. Wilson as Settlement Officer in 1888 had broken down owing to climatic conditions, and the drain of tenants to the neighbouring canal colony villages. Frequent

suspensions and remissions were required, and finally the villages were put under a fluctuating assessment at the rates of the Hafizabad Circle of the Gujranwala District, slightly modified. No term was fixed for their settlement, but it most naturally was a temporary expedient, and the villages have been re-assessed with the other villages of the Phalia tahsil. The need for leniency is shown by the record of 4 years' collections. The original fixed assessment of 1888 was Rs. 25,360, but the average of 4 years from kharif 1910 to rabi 1914 was only Rs. 15,982. The conditions of the tract obviously justify leniency still. The drain of tenants is bound to continue when the Bar of Phalia is irrigated, even though 25 per cent. kharif irrigation in these villages will prevent them from getting too bad. The previous rates have been raised little. The rates sanctioned by Government in 1909 were—

						Rs. A. P.
Chahi	...	...	...	...	...	1 8 0
Sailab I	...	...	...	...	...	1 8 0
Do. II	...	...	...	...	...	1 0 0
Do. III	...	...	...	...	...	0 8 0
Barani	...	...	...	...	...	1 0 0

As a matter of fact these rates were not actually imposed by Mr. Rudkin. His *chahi* rates in the villages were Re. 1-4-0 or Re. 1-6-0. The *barani* rates were 14 annas, Re. 1 and Re. 1-2-0, but the average would be the one rupee sanctioned. The new rates sanctioned—

						Rs. A. P.
Chahi	...	...	...	...	...	1 12 0
Saliab I	...	...	...	...	...	1 8 0
Do. II	...	...	...	...	...	1 0 0
Barani	...	...	...	...	...	1 0 0

will therefore give a larger increase than was anticipated in the report. In assessing the new Hithar West Circle the eastern part is the better and has been assessed above rates, the *chahi* rates being usually Re. 1-14-0. The western half is kept below rates, and in many villages the *chahi* rate is Re. 1-10-0. In all cases the *nahri* rate is the same as the *chahi*. In making my village announcements, I have assessed more villages above rates, than below, so if the calculation be made on the average harvested area, there will be an excess of about one per cent. In future the circle will be changed by transferring to the Bar, the villages which have part of their area above and part below the *nakka*, though in these the part below must at future assessments be made to correspond with the neighbouring and similar villages of the Hithar.

62. The circle was a temporary one made in order to avoid complication of statistics. It comprised parts of the old circles Bar and Jhelum of the Bhera tahsil. Really the two should not be combined, but there were only a few villages of the riverain circle, so they were combined with the others. The Bar villages have been assessed at the same rates as the Bar of Phalia. The riverain villages are long narrow strips extending down into the river-bed, but also a long way into the Bar, so they have soil of various descriptions and they are cut into by the main line of the Lower Jhelum Canal. All the land down to the bank of that canal will be irrigated by the Upper Jhelum Canal, but as the land is on the slope down to the river, it is not of the usual Bar quality. It is more sandy and the water is nearer the surface. Moreover in the wells near the canal the water level is raised still further. One village Haria has declined canal water altogether. One has accepted water up to the road to Shahpur. Others will irrigate up to the bank of the canal, but I have had to assess the *chahi* rate at something more near to the Bet Jhelum rate, and have imposed Rs. 2-6-0. In the area to the north of the canal the assessment Rs. 5,520 is fixed, and the villages will in future be classed with the Bet Jhelum Circle.

63. The district boundary as now constituted includes certain villages which were assessed with other villages irrigated by the Lower Jhelum Canal, and they have not been included in my assessment. They are Khizar, Pind

Makku, Fakirian, Garh and Mona Depôt, with parts of Chak Raib, Gurbakhshpura and Mona. Two villages in the riverain, Malakwal and Nasirpur, were assessed by Mr. M. S. Leigh, Settlement Officer of Shahpur, but I have announced their assessment to take effect from kharif 1916, like the rest of the Bet Jhelum, with which they will in future be joined.

CHAPTER V.—DISTRIBUTION OF THE REVENUE.

64. At last settlement Captain Davies recorded detailed inspection notes of each village, and his notes were usually clear and accurate. His village assessments I thought somewhat unequal, and in my opinion some inequality is due to the unwieldy size of the assessment circles adopted according to the tendency in that period. But however careful the assessment was at that time the changes of 20 years are considerable. The hill torrents of the Gujrat and Kharian tahsils change their course, new wells are made, of which some are good, some are bad: fresh land is broken up. I have written inspection notes of all villages except those in the Bar proper. Each estate was separately seen and a note written on the same day in or near the village after discussing the statistics with the villagers and hearing their opinion on the revenue-paying capacity of the village. As the effort of the whole community is to minimise their resources and get off with a light assessment the work is tedious, but finally all their complaints are heard and the result of my personal observation has been recorded. The latter of course varies in worth for the appearance of a village differs a great deal when a crop is just sown and when it is nearly ripe. In distributing the sanctioned assessment for each circle I found myself ranging from double the previous demand to an actual reduction, and although I finally took in Gujrat tahsil very nearly the 25 per cent. increase which Sir Louis Dane had thought right, the project for an automatic increase would have led to most unequal distribution and unfair results. In the other tahsils both the amount of increase and its distribution are contrary to Sir Louis Dane's expectation. There were a good many objections in the Gujrat tahsil, but few in Kharian. There were more than I expected in Phalia, but the people did not seem to appreciate at first the difference between the fixed and fluctuating assessment. Finally the new assessment has generally been well received and is considered lenient.

65. One of the most important parts of settlement operations, which should be least hurried is the distribution over holdings. In paragraph 8 of his review of Captain Davies' Final Report of 1893, the Commissioner (Mr. Thornburn) had a good deal to say on the subject, which is still true. But in a village where there is soil of varying kinds and wells of varying efficacy a just distribution is a complex and detailed matter. But in most cases a really detailed distribution is not favoured by the people either owing to dissensions among themselves, or because they do not want to leave too much in the hands of the patwari. But the more detailed the distribution, the more detailed must be the materials for it, and as the question of reclassification of soils was not discussed when Rai Sahib Hira Singh was sent to prepare a new record, the record does not lend itself to niceties. But an effort has been made to adjust the method to local conditions and the chief consideration has been the wishes of the people. In the year previous to the announcement of the new revenue *bachh* files were prepared for each village. At first these were merely kept pending, but later I took up all cases and compared them with the previous method and my inspection notes. Then, if I had reason to disagree with the proposed method of distribution, I would send it back for further report. For instance in a village where land is of two kinds, good and bad, the powerful men of the village, owning land in the good part would try to get an all-round rate sanctioned, or in a riverain village the men would also ask for an all-round rate so that when inferior soil was washed away they should get as much as possible remitted. At the time of announcing the revenue each file was put up and the method finally decided in consultation with the owners. If they disputed it or the amount of the revenue the patwari was at once made to work out for them the incidence

on various parts of the village, then the final method would be decided and the distribution proceeded with. Later objections were few. In the Gujrat tahsil the usual method was previously an all-round rate on cultivation with *abiana* on wells according to their worth. But the soil of this tahsil varies, the low land *Chamb* by the borders of hill torrents or in depressions is much better than the high lying *maira*, and I induced many villages to have different rates on soils apart from the *abiana* on wells. In Kharian the usual previous method was as in Gujrat, but ancestral shares were used to a greater extent. They have however been given up now in many villages. In Phalia the introduction of fluctuating assessment implies that no method of distribution was required. The almost universal method in villages under fixed assessment was by kinds of soil, *chahi* one rate and *barani* another. This took no account of the differences between wells and the man with a poor well is relatively over-assessed. I tried to induce the people to adopt the Gujrat tahsil plan of *aviana* on wells, with a proper distinction between good and bad but they refused. The most I could get them to do was to alter the proportion between *chahi* and *barani* to greater conformity with my settlement rates.

The following table shows the system of distribution adopted at this and the last settlement :—

Tahsil.		NUMBER OF VILLAGES UNDER FIXED ASSESSMENT IN WHICH THE REVENUE WAS DISTRIBUTED BY						
		All-round rate.	Differential soil rates.	Hereditary shares.	All-round rate after deducting <i>abiana</i> .	Differential soil rates after deducting <i>abiana</i> .	Hereditary shares after deducting <i>abiana</i> .	Zamindari.
Gujrat	Old	281	60	40	123	18	18	6
	New	185	114	12	185	44	5	1
Kharian	Old	311	34	129	...	...	...	3
	New	328	35	113	1	...	...	...
Phalia	Old	25	170	5	8	...	...	4
	New	23	185	1	2	...	...	1
District	Old	617	264	174	131	18	18	13
	New	536	334	126	188	44	5	2

The distribution by hereditary shares is less equitable. Owing to alienations and changes in cultivation shares do not now constitute a true measure of right.

66 Under the orders contained in paragraph 10 of appendix XX of the Settlement Manual where the enhancement in any estate exceeds 33 per cent. by any considerable amount the excess is to be deferred for 5 years. If it much exceeds 66 per cent. the excess is deferred for another 5 years.

The total amount thus deferred is—

Tahsil.		For 5 years.	For 10 years.	Total.
		Ra.	Ra.	Ra.
Gujrat	...	8,963	340	9,303
Kharian	...	7,941	225	8,166
Phalia	...	975	60	1,035
Total	...	17,879	625	18,504

67. Remissions of assessment on account of new wells have been granted in accordance with the rules in paragraph 505 of the Settlement

Protective leases for wells.

Manual. In the Gujrat and Kharian tahsils the area irrigated from each well averages little, but it was considered enough to give exemption for 20 years, which is what people expect. In the Phalia tahsil the average area irrigated is large, and the remission is ample to repay twice the cost of the well except in the Bar. Hence in all the district, a new well made on barani land has received remission for the area shown as irrigated, for 20 years: a well repaired has received a lease for 10 years, and a well made to irrigate land already irrigated has received a lease for 10 years for half the combined chahi area, or to save trouble, for 5 years on the whole combined area. When the land irrigated was previously partly barani and partly chahi a proportionate reduction has been made.

I found that when old wells had fallen out of use, the rules regarding remission of assessment had not been complied with. In some cases an old well had fallen out of use and a remission of assessment was required, yet in its place a new well had been made which should have a protective lease. Instead of sending up numerous cases for remission up to the end of the expiring settlement, and then giving a fresh lease I have preferred to settle the matter by giving the new lease from the new assessment for the full period, deducting part of it because the old rate was a small one and the new rate higher. The amount to be given as a protection depended on the method of distribution. In the Gujrat and Kharian tahsils the well assessments were usually in the form of abiana a lump sum on each well. But in many cases these did not represent the proper assessment on the irrigation. In these two tahsils with the Commissioner's agreement, I noted for each well the abiana imposed by the villagers and the difference on the irrigated area between the chahi and barani rates of the circle. When the abiana was less than Rs. 10, I gave the greater of these sums, where the abiana was above Rs. 10, I gave whatever was less. In the Phalia tahsil where the men distribute the revenue according to classes of soils, chahi and barani, the protective lease is of the difference between circle rates. In this tahsil the amount of leases is large, because the area attached to the wells are large, averaging 30 acres, but going up to as much as 80 acres. The previous failure to give remissions has swollen the sum. In the circles to have a fluctuating assessment the lease provides that within the area shown as commanded by the well, any area actually irrigated shall be charged the barani rate for the period of the lease. The amount remitted in the first year of the new assessment in each tahsil, from the fixed assessment is as follows :—

						Rs.
Gujrat	...	...	...	...	...	18,234
Kharian	...	...	...	...	...	1,550
Phalia	...	...	...	...	...	17,421
Total					...	<u>37,205</u>

68. Remissions on account of damage caused by road-side trees (paragraph 513 of the Settlement Manual)

Remissions for road-side trees.

have not been given in any village. The area affected was not enough to make any considerable difference in fixing the assessment of the whole village, and when asked to make a difference in the distribution over the holdings the men always refuse.

CHAPTER VI.—MISCELLANEOUS.

69. In paragraph 11 of letter No. 270, dated the 28th March 1912, the Financial Commissioner estimated the

Cost of settlement.

cost of the settlement as Rs. 2,85,642 and the duration as 3 years. But from the cost was to be deducted Rs. 1,03,560, the cost of killabandi to be recovered from the proprietors by an acreage rate.

The actual time taken over the settlement has been 3 years and 7 months. The expenditure since I took over charge on the 25th October 1912 up to the 31st March 1916 has been Rs. 2,96,266. That estimated for the remaining period is Rs. 14,972. From this can be deducted the value of tents stationery, &c., purchased out of my settlement budget which (with other stock received from other districts) is available for transfer, say, Rs. 3,800. The final result is that the settlement has cost approximately Rs. 3,07,400. Proposals will be submitted for the recovery of their share of the cost of settlement from jagirdars. The excess over the sanctioned amount is not considerable. It may be almost all explained by a difference in one or two items. The sum put down for the pay of the Settlement Officer and Extra Assistant Settlement Officer was exceeded by about Rs. 500 a month, that is, Rs. 21,000 in all. Travelling allowance of establishment cost more than was estimated. No estimate was made for allowances to officials sent for settlement training.

As the fixed demand has been increased by Rs. 1,19,657 (initial demand) and the introduction of a fluctuating assessment will bring in an average increase of six lakhs a year, the cost of settlement will be paid off in less than a year, but of course the change of system of assessment affects the value of this calculation.

70. The investigation into revenue assignments has continued during the settlement. In each tahsil the cases which would affect the distribution of revenue were decided before the new demand was announced. Cases which were referred for orders were repeated on the old terms, and later orders will be carried out subsequently. The investigation was not easy. The files in the Deputy Commissioner's office were incomplete, and had been allowed to fall into confusion. Registers had not been kept with the letters sanctioning them. Captain Davies had gone into the subject with great care at last settlement, and had put down all cases in a large register with his own hand, but in some instances he had been content with the abstracts of information on the district file. I have obtained in all cases where possible the original register from the Financial Commissioners' office, and in my orders have quoted the letter of the authority which gave the original sanction. This was obscured in Captain Davies' notes as he quoted only the Commissioner's endorsement. In some cases the terms have now been more correctly quoted, and some instances of misinterpretation of previous orders have been reported. Important cases have been reported for orders separately, but all ordinary cases, with recommendations for resumption or maintenance, have been sent up in registers under different heads for each tahsil. When final orders are received, a complete register for each tahsil will be made up under the headings prescribed in paragraph 573 of the Settlement Manual. The details will be a copy of my order which gives details of the original authority and conditions of present maintenance. The total value of the assignments still left chargeable to the revenue cannot be exactly given, because some of the largest assignments are in Phalia tahsil, and the land will receive canal irrigation. The fluctuating assessment will give a largely increased sum to the jagirdars. However, if these be still estimated at the old rates the sum assigned would be —

					Rs.
Gujrat ...	...	...	...	...	11,480
Kharian ...	...	...	...	...	10,420
Phalia ...	..	...	...	...	21,741
Total ...					43,641

but the value will be much greater in future because of the rise in Phalia. With regard to the large assignments I have recommended that they be treated like the Sheikhpura case in the Gujranwala District, that is, that in canal irrigated tracts the jagirdar shall receive all the chahi and barani revenue of the land concerned, and the barani rate on the matured area under canal irrigated crops.

Among the smaller grants, reference should be made to various small ones in favour of the village institutions, under Rs. 20 in value. These have been dealt with in accordance with paragraph 196 (3) of the Land Administration Manual, and 61 have been resumed as a grant from Government. Apart from these 71 grants have been resumed, and the present number of assignments under various heads is —

	Rs.
In perpetuity	151
For maintenance of institution	46
During the pleasure of Government... ..	78
For term of settlement	28
For a life or lives	77
	<hr/> 380 <hr/>

71. The Forest Department managed considerable areas in the district.

Forests. The rakhs in the riverain bring in some revenue from grazing dues, and from the growth of shisham trees which thrive there. All the reserved forests in the Bar which can get perennial irrigation are now being disforested and handed over to the Colonization Officer. There were also some forest areas under the control of the Deputy Commissioner, but the whole area of Government land which will be available for colonization is only about 49,000 acres.

72. The general method of paying the revenue is half in *kharif* and half in *rabi*. This does not represent the

Amount and dates of instalment. value of the crops either in their proportion to the cropping of the year or in money value. But it simplifies the accounts. The instalments have in each case been fixed according to the wishes of the people. With the introduction of canal irrigation and a fluctuating assessment, the question does not arise in many villages, as the demand there is paid after each harvest. But for the villages wholly or partly under fixed assessment the figures are as follows:—

INSTALMENTS.

	Half in <i>kharif</i> , half in <i>rabi</i> .	Two-fifths <i>kharif</i> , three-fifths <i>rabi</i> .	One-third <i>kharif</i> , two-thirds <i>rabi</i> .	Whole in <i>rabi</i> .	TOTAL.
Gujrat ...	444	59	13	...	516
Khasian ...	472	3	...	2	477
Phalia ...	133	69	10	...	212
District ...	1,049	161	23	2	1,235

At present the revenue is paid in two instalments for *kharif* (15th December and 15th February) and one for *rabi* (20th June). Recently the Commissioner of Rawalpindi proposed the adoption of system by which *lambardars* should be called up in turn, and so the revenue of a tahsil might be received gradually. For this purpose it is necessary to authorise collections between two dates with an interval enough to work the scheme. I have sent up a proposal that recoveries shall be made (a) for *kharif* from 20th January to 20th February, (b) for *rabi* from 1st July to 31st July, the villagers to pay in their revenue on a date fixed within those limits according to a list approved by the Collector. The villagers asked for these dates when I was announcing the revenue. The reason for fixing the 20th January is that all the men asked to have a date after the Lohi or Lohri which is on the 12th January. On that day the accounts of the year's transactions are made and after it the price of *kharif* grains is fixed.

Cesses.

73. The following cesses are levied per cent. :—

					Rs.	A.	P.
Local rate at	...	...	...	...	8	5	4
Lambardari cess at	...	...	...	...	5	0	0
					13	5	4

But in 485 villages where the *ala lambardari* inam is still paid, that is, one per cent. more, the cesses come to Rs. 14-5-4. But as the present *ala lambardars* die the extra one per cent. ceases.

Village headmen.

74. The number of village headmen in each tahsil is shown below :—

Tahsil.					No. of estates.	NUMBER OF LAMBARARS.	
						At last settlement.	Now.
Gujrat	...	...	...	...	547	1,060	1,028
Kharian	...	...	...	...	544	805	797
Phalia	...	...	...	...	420	761	743
District	...	...	...	...	1,511	2,626	2,568

Considering the whole assessment of Rs. 4,38,000 fixed for Gujrat the number of lambardars is too great. The average sum for which each man is responsible is Rs. 426. When water-advantage rate and occupier's rate are added in the Nahri circle the lambardar in that circle will have enough responsibility. But in the rest of the tahsil efforts are required to reduce the number as vacancies occur. The same is needed in the part of Kharian which will not be irrigated. During settlement the reduction of 58 posts has been sanctioned. In Phalia the introduction of canal irrigation will much increase the responsibility of the lambardars. I have been chary of recommending reductions here. It is more likely that in the future additions will be needed.

75. In paragraph 99 of Captain Davies' Final Settlement Report he showed that at revised settlement in 1868 *ala lambardars* or chief headmen were appointed in almost every village irrespective of the number of headmen. He had submitted proposals for the reduction of these posts, abolishing them gradually in villages which had less than 3 lambardars. Later by Punjab Government letter No. 233-S., dated 1st June 1909, the gradual abolition of the system in all districts has been sanctioned: so as the men die their inams are resumed. The effect of the orders up to the present time is as follows :—

Tahsil.					AT LAST SETTLEMENT.		Now.	
					No. of <i>ala</i> lambardars.	Value of inams enjoyed.	No. of <i>ala</i> lambardars.	Value of inams enjoyed.
						Rs.		Rs.
Gujrat	...	...	...	...	512	3,384	199	1,828
Kharian	...	...	...	...	543	2,039	198	975
Phalia	...	...	...	...	273	1,969	88	831
District	...	...	...	...	1,328	7,392	485	3,634

As Captain Davies noted, grants out of waste land had also been made originally. These were resumed. But there were also some grants in the way of revenue assignments given to men for services rendered as zaildars, and I have sent up proposals to have these gradually terminated.

76. As the *alt lambardari inams* are reduced in accordance with Punjab Government letter No. 233 of 1st June 1909 quoted above, the money is devoted to *zamindari inams* to selected *lambardars* in each *zail*, as a helper to the *zaildar*. The rules for carrying out the scheme were sanctioned in Financial Commissioner's letter No. 6282, dated 20th December 1909. The number of *inams* finally to be established is 100, and this number will be attained gradually, after increasing each *inam* to Rs. 50 as money is available. The number at the time of the introduction of the rules was 93. The final sum to be expended is Rs. 4,964. The present available is Rs. 3,634, an average of only Rs. 39 each. The process of improving the pay is slow and the inadequacy of the remuneration is a constant ground of complaint. I am inclined to think that fewer men working on higher *inams* would be more satisfactory.

77. The revision of the *zaildari* system of the district was not taken in hand till the close of last settlement and orders were not given till 1896, then by Punjab Government letter No. 95, dated 18th April 1896, it was decided that the system of circle payment was to be maintained and no system of grading was to be adopted: the boundaries of various *zails* were to be altered, and four *zails* were to be abolished when the incumbents died. In 1902 three *zails* of *Kharian* were made into two, and in 1908 the absorption of one of the small *zails* to be abolished was adjourned till settlement. The abolition of another of the four *zails* has not apparently been carried out, so the number of *zails* found now was 16 in each of the three *tahsils*. But by the transfer of villages from *Shahpur* four more were added making 20 in *Phalia* *tahsil*.

Proposals for re-arrangement have been sent up. Those for *Gujrat* and *Kharian* have been sanctioned, leaving the total number as before, but altering boundaries to fit in with proposed boundaries of police stations. For *Phalia* proposals have not yet been sanctioned.

At the same time a change in method of payment has been proposed. The payment by 1 per cent. on the revenue of the *zail* leads to great inequalities. The revenue demand of a *zail* does not necessarily correspond with the *zaildar's* work, and the previous arrangements of *zails* showed that some *zails* must have been made large on purpose to give a larger allowance to a man of influence. The present arrangement gives unequal sums ranging from Rs. 85 to Rs. 543, and the *zaildars* themselves recognise that the system is unfair. In 1895 the Commissioner said he would have preferred a system of grades. I have discussed the subject with the *zaildars* at various times, and all are in favour of a system of definite allowances, and they think the allowances should be graded. They suggest a minimum of Rs. 250 and a maximum of Rs. 400. I have submitted for sanction a scheme by which fixed allowance shall be given in grades of Rs. 200, Rs. 275 and Rs. 350. This will give the Deputy Commissioner the power to reward or punish by changing a man's grade, but to prevent a feeling of insecurity, and also to lighten the Deputy Commissioner's work, the re-arrangement shall be made at intervals of five years. No new *zaildar* should get more than the lowest grade for at least one year.

78. There are at present 260 *patwaris* in the district—92 in *Gujrat*, 74 in *Kharian* and 94 in *Phalia*—including 12 assistant *patwaris*. Proposals are being sent up for a revision of the number. In the part of the district which will not get canal irrigation, the number of *patwaris* will be decided on the work to be done, with reference to the rules in Financial Commissioner's Standing Order No. 15. In the canal irrigated tract the problem is more difficult. A

scheme has been proposed for the unification of the canal and revenue patwari agency, so that all records of any village should be in the hands of one man. But the matter is still under discussion. The Financial Commissioner has also directed that a scheme be drawn up on the lines of the experiment tried in Lyallpur and Shahpur. As nothing has yet been decided, no details can be given in this report.

The number of kanungos is similarly undecided. But I would note that an increase is certainly required as I consider the kanungo staff has been too weak to exercise proper supervision.

79. New rules for the measurement and assessment of areas subject to river-action have been sanctioned by the Financial Commissioner and are printed as an appendix to this report. It has now been proposed to class the sailab land of the Tawi with hill torrents and not with the main rivers, the Chenab and Jhelum. The new rules are the same as those sanctioned for Sialkot, though the rate per acre has been considered separately. New rules of procedure have also been submitted and will be found in the appendix.

80. A report dealing with the secure and insecure areas of the district has been submitted. The scheme at present in force was proposed after the end of last settlement and the method of classification was the simple but fallacious one of classing as secure all villages where there is a large proportion of chahi and as insecure those which have no wells. But many of the barani villages are in the eastern part of the district where soil is good, and crops seldom fail for lack of rain. They are better off than many chahi villages in the Nahri of Gujrat or the Hithar circles of Phalia where the soil is poorer, rainfall more uncertain and wells have been made because barani crops are so precarious. Roughly the part of the district to the east of the Grand Trunk Road can all be called secure. Further in 1896 all the riverain was classed as secure. But riverain villages are assessed at a comparatively high rate justified if they get normal flooding, yet the irrigation is liable to great variation both in quantity and quality of the flood. A low flood fails to irrigate the lands and often a high flood scours much sand out of the bed of the river and deposits it on cultivated land. However without going so far as to call all the sailab insecure, I would say that all the Chenab riverain below the outflow of the Upper Jhelum Canal is somewhat precarious. Above that limit the rainfall is better and in the Jhelum Valley the rainfall is also better. In the precarious part now a considerable area is under fluctuating assessment. The parts of the district which have in the past required most suspensions will be protected by the canal so the list of insecure villages resolves itself into the part between the Grand Trunk Road and the main line of the canal, with certain villages on the Chenab riverain. A list is given in appendix II with an extract from my letter No. 183, dated 11th March 1916, giving the method approved for the working of suspensions and remissions. The danger rate is not yet approved so it is not quoted in the appendix.

81. The record of tribal custom drawn up at last settlement is a very brief document of 22 questions and answers, apparently bringing up to date the record made at the settlement of 1867. But it made no mention of certain important subjects. A fresh enquiry has been made on the model of Mr. Craik's recently published volume for the Amritsar District, with little alteration. I have attested all the questions with representatives of the main tribes, but the more detailed attestation and the compilation of instances from the records has been entrusted to the Extra Assistant Settlement Officer, Lala Fateh Chand. He too is responsible for the abstract in English.

82. The revision of the gazetteer of the district has not been undertaken owing to lack of time and pressure of other work.

83. The following officials received training in the settlement :—

Training of officials.

Assistant Commissioner ...	...	...	...	1
Extra Assistant Commissioner ...	...	...	...	1
Tahsildar candidates ...	...	...	...
Naib Tahsildar candidates ...	...	...	...	10
Kanungo candidates ...	...	...	...	5
Total ...				19

84. It is for Government to decide the term for which the new settlement should be sanctioned. This was not decided on the Assessment Reports, but the Financial Commissioner noted in his orders on the Kharian and Phalia Assessment Reports that the term should not be more than 10 years, for villages under fluctuating assessment, other assessments might remain for 20 or even 30 years, and the maps and records which have been prepared by remeasurement and killabandi might be left for the same period. The state of the records is certainly a point to be considered. The records and maps prepared for the killabandi area and in the riverain villages are good and can well last the full term of a settlement, but as explained in paragraph 25 the circumstances in which the killabandi maps are accurate will not remain, and though I anticipate they will form an excellent basis for later correction, they will need alteration when irrigation is established. The records and maps of the unirrigated parts of the district and the parts of Phalia between the killabandi and riverain tracts are described in Chapter III. If the instructions for maintaining the records between settlements are strictly enforced, the record can be kept workable, but my own opinion is that they should not be left more than 20 years without a formal revision.

With regard to other considerations the main one is to see whether Government is obtaining its due share of the resources of the district. In the canal irrigated tract assessment has been purely tentative with no knowledge of the profits of the soil under canal irrigation, and it is reasonable that a fresh assessment be made as soon as the profits can be fairly estimated. The Financial Commissioner has put this period at 10 years. With regard to the dry part of the district, the development of the irrigated part may quite easily draw tenants away, and make a marked difference in the landlord's assets, and therefore in the Government share which would need re-distribution. It must further be noted that prices are now much higher than those assumed in the assessment reports. During the war no estimate of the future movements of prices can be made, but it is probable that high prices will be maintained, and in that case the district can afford to pay more. Finally even if the above factors were of no account it may be noted that the present assessment is light, compared with the theoretical demand. It is probable therefore that in 20 years the Government demand will be capable of material increase. I am of opinion that a term of 20 years should be sanctioned. Government need not of course then necessarily re-assess.

85. I was in charge of the settlement continuously from the 25th October 1912 to the beginning of June 1916. The Extra Assistant Settlement

Notice of Officers.

Officer was Rai Sahib Hira Singh, who had been in charge of the map correction and preparation of records prior to my arrival. In order to ensure continuity at the beginning of settlement he received an extension of service up to the end of March 19th 1913. For the last few weeks he was an extra officer, as on the 18th February 1913 he was succeeded by Lala Fateh Chand who, with the exception of a few weeks' leave has been in charge to the end. He had a difficult task to perform, but brought to it long experience, as he had been in independent charge of a settlement in the Jammu State. His control over a staff somewhat inefficient in its lower grades has been exercised without friction. In the new sphere of killabandi he has worked hard and ensured an

accurate record, and his knowledge of settlement work in general has enabled him to give me valuable advice for which I record my acknowledgments and thanks.

There were two Tahsildars. Lala Amrit Rai was in charge of the general supervision of all but the killabandi area. He is competent and energetic, but unfortunately he fell ill in 1915 and had to be transferred. He was succeeded by M. Harbel Singh. The killabandi work was in charge of M. Fazl Hussain, who had had previous experience of the work in the Gujranwala District. He has worked hard and well, and in spite of difficulties has brought his task to a creditable accomplishment. Among the district Tahsildars the only two who helped were B. Amir Singh and M. Akbar Ali, to both of whom my thanks are due.

Of the Naib Tahsildars, I would give special commendation to B. Ram Singh, B. Arjan Singh and M. Abdulla Khan. All three have proved themselves most reliable and industrious workers. M. Rattan Singh and Pir Haidar Shah have also done well. Lala Ladha Ram is a good Head Clerk, but has been away most of the settlement, and was succeeded by Lala Hisari Lal, who though young is a promising officer. Misr Damodar Das has been satisfactory as reader.

The kanungos were the weak part of the staff, and showed the disheartening effects of the block of promotion. When I could promote none, but had to revert several, it was difficult to expect first rate work. But in spite of circumstances many worked very well, and I must give special mention to P. Chandar Bhan, who was put in charge of a Naib Tahsildar's circle for a time and did well.

The patwaris too suffered from the lack of promotion, and had not the usual incentive to strenuous work. But the drudgery of the settlement falls on them, and they have certainly done much hard work.

Of the officials not directly on the settlement establishment, the Sadr Kanungo M. Ali Mahomed Shah has given useful help in responding to the frequent demands for papers and statistics.

Orders required.

86. Orders are required only on the term of settlement (paragraph 84).

GUJRAT,
The 4th June 1916.

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H. S. WILLIAMSON,
Settlement Officer,

APPENDIX NO. I.

PRINCIPAL GAZETTE NOTIFICATIONS RELATING TO THE PRESENT SETTLEMENT OF THE GUJRAT DISTRICT.

No.	Dated.	Abstract.
1703-S. (Rev.)	... 5th August 1912	... Ordering a general re-assessment in the Gujrat District.
1704-S.	... Ditto	... Ordering revision of the record of rights in the Gujrat District.
1181.	... 6th November 1912	... Assumption of charge of the office of Settlement Officer, Gujrat, by Mr. H. S. Williamson, I.C.S., on 25th October 1912.
1124-C.	... 25th October 1912	... Conferring powers on Collector upon Mr. H. S. Williamson, I.C.S., Settlement Officer, Gujrat.
30-Gaz.	... 7th January 1913	... Appointment of Lala Fatch Chand as Extra Assistant Settlement Officer, Gujrat.
240	... 18th February 1913	... Assumption of charge of the office of Extra Assistant Settlement Officer by Lala Fatch Chand.
520	... 9th April 1913	... Retirement of Rai Sahib Hira Singh, Additional Extra Assistant Settlement Officer, from the service.
373-S.	... 2nd June 1913	... Appointment of Mr. H.S. Williamson, I.C.S., Settlement Officer, Gujrat, as Deputy Commissioner, Gujrat, in addition to his own duties.
1443-S.-Gaz.	... 14th July 1913	... Granting leave to Lala Fatch Chand, Extra Assistant Settlement Officer.
1194	... 10th November 1913	... Conferring powers of Deputy Commissioner upon Mr. H. S. Williamson, under section 3 (2) of Punjab Alienation of Land Act for the purpose of sanctioning exchanges of land arising out of the kistabandi proceeding within the limits of Gujrat District.
G 493-Gaz.-I	... 7th April 1916	... Conferring powers of Colonization Officer upon Mr. H. S. Williamson, I.C.S., within the limits of the Upper Jhelam Canal in the, Gujrat District.
465-Gaz.	... 23rd April 1916	... Appointment of Lala Fatch Chand, Extra Assistant Settlement Officer, as Revenue Assistant, Gujrat, on the termination of settlement

APPENDIX No. II.

PART I—ASSESSMENT.

Rules for the assessment of sailab tracts in the Chenab and Jhelum riverains in the Gujrat District.

1. When by river action land assessed as cultivated is carried away or rendered unfit for cultivation, or land assessed as pasture is carried away or rendered unfit for grazing, the assessment charged on it shall be remitted.

2. New uncultivated land added by alluvion which is fit for grazing, unassessed land which has by the action of the river become fit for grazing, and assessed cultivated land which has by river action ceased to be fit for cultivation, but is fit for grazing, shall be ordinarily assessed at the rate of three annas per acre.

Exception.—When the produce is very poor, the assessing officer may for reasons recorded assess at one anna per acre.

3. Land which was assessed at settlement as cultivated shall continue to pay the revenue at which it was then assessed, unless and until its assessment is reduced for deterioration. Thereafter it shall be treated as if it were new land.

4. New cultivated land added by alluvion, land not cultivated at settlement, but since brought under cultivation and land cultivated at settlement which has since had its assessment reduced for deterioration and has again become cultivated, shall ordinarily be assessed at the maximum rate stated in rule II if first class crops, and that half that rate if inferior crops are grown on its becoming cultivated.

(a) First class crops are—

Sugarcane.
Turmeric.
Maize.
Cotton.
Wheat.
Wheat and barley.
Wheat and gram.
Vegetables (other than fodder).
Tobacco.

(b) Second class crops are all other crops.

5. Land which under the above rules has been assessed at less than the maximum rate shall be assessed at the maximum rate with effect from the first year in which the class of the crop shall justify such imposition.

6. Land shall not be classed as bearing crops of the first or second class until it has for one harvest borne a four-anna crop of that class. The success or failure of cultivation in subsequent years unaccompanied by river action shall not affect the assessment.

7. The classification of land should not be too minute. Unless a survey number is very large, it will usually be best to apply a single rate to the whole number, even though different parts of the field may differ somewhat in the character of the crops grown and in the quality of the soil.

8. In calculating the revenue no fractions of 10 or less than 10 marlas should be taken into account; 10 marlas or less will be disregarded and more than this will be taken as a whole kanal.

9. Land which was assessed at settlement as cultivated, or has since been assessed at the full rates should not ordinarily have its assessment lowered, unless it is found that such land has been injured by a flood or a sand deposit, in either of which cases it shall be treated as new land and be dealt with in accordance with the above rules.

10. Land which has been rendered culturable by river action and subjected to assessment at settlement or under these rules and subsequently remains uncultivated for four successive harvests, may be presumed to have been rendered unfit for cultivation by river action.

11. The maximum rate shall be—

Tahsil.				River.				Rate.
Gujrat	...	...	...	Chenab	...	...	...	Rs. A. P. 1 12 0
Kharian	...	...	...	Jhelum	...	...	...	1 12 0
Phalia	...	...	...	Jhelum	...	...	...	1 12 0
Phalia	...	...	...	Chenab	...	...	...	1 6 0

DRAFT RULES—PART A.

1. When by river action land assessed as cultivated is carried away or rendered unfit for cultivation, or land assessed as pastura is carried away or rendered unfit for grazing, the assessment charged on it shall be remitted.

2. New cultivated land added by alluvion, which is fit for grazing; unassessed land which has by the action of the river become fit for grazing, and assessed cultivated land, which has by river action ceased to be fit for cultivation, but is fit for grazing shall be ordinarily assessed at the rate of two annas per acre.

3. Land which was assessed at settlement as cultivated, shall continue to pay the revenue at which it was then assessed, unless and until its assessment is reduced for deterioration. Thereafter it shall be treated as if it were new land.

4. New cultivated land added by alluvion, land not cultivated at settlement, but since brought under cultivation with the aid of the river, and land cultivated at settlement which has since had its assessment reduced for deterioration and has again become cultivated, shall ordinarily be assessed at the maximum rate stated in rule 9, when growing first class crops, and at half that rate when growing inferior crops.

(a) First class crops are—

Sugarcane.
Turmeric (Bajwat).
Maize.
Cotton.
Wheat.
Wheat and barley.
Wheat and gram.
Vegetables (other than fodder).
Tobacco.

(b) Second class crops are all other crops.

5. No assessment shall be imposed on sown crops, which are likely to return less than the seed sown, and if the outturn is likely to be very poor, *e.g.*, not more than twice the seed sown, half the rate due under rule (4) shall be imposed for that year.

6. Land which has under the above rules been assessed at less than the maximum rate, shall in subsequent years be assessed at the maximum rate, as soon as the class and character of the crops shall justify such imposition.

7. Land which was assessed at settlement as cultivated should not ordinarily have its assessment lowered unless it is found that such land has been injured by a flood or sand deposit; in either of which cases it shall be treated as new land, and be dealt with in accordance with the above rules.

8. In the case of land assessed under rule (4), the assessment may be varied as follows :—

(a) Land assessed at the maximum rate may be assessed at half rate, if for four consecutive harvests no first class crops have been matured.

(b) Land assessed at half rate or less may be assessed at grazing rates under rule (2) when no crops have been matured for four consecutive harvests.

9. Where the assessing officer finds that any considerable area of land which was assessed at settlement or since at the full sailab rates, has owing to a change in the course of the river, or from other causes, become out of reach of the ordinary river flood, and has for that reason ceased to be cultivated as sailab land, he shall submit a full report on the circumstances of the case to the Collector for orders. The Collector shall then, if necessary, distribute the fixed assessment over the existing cultivation or having, if advisable, suspended the current demand, report the case for sanction, to put the whole area under fluctuating assessment, or to reduce the fixed assessment of the estate.

10. The classification of land should not be too minute unless a survey number is very large, it will usually be best to apply a single rate to the whole number, even though different parts of the field may differ somewhat in the character of the crops grown and in the quality of the soil.

11. In calculating the revenue no fractions of 10 or less than 10 marlas should be taken into account : 10 marlas or less will be disregarded, and more than this will be taken as a whole kanal.

12. The maximum rates shall be :—

			Rs.	A.	P.
Gujrat	...	Chenab	...	1	12 0
Kharian	...	Jhelum	...	1	12 0
Phalia	...	Jhelum	...	1	12 0
Do.	...	Chenab	...	1	6 0

PART B—PROCEDURE.

The Collector shall maintain in his office a list of estates subject to the action of the Chenab and Jhelam rivers and their branches, and any alterations from time to time necessitated in the list shall be made under his orders.

2. The changes caused by river action should be shown both in the patwaris' own diallusion tracing and in the tracing to be filed with the Government copy of the diallusion file. The former tracing should be prepared from the village map on untacked mapping sheets and cover the whole of the village or the part liable to be affected by diallusion changes, and should continue to be used till a fresh tracing is prepared under rule 5. The tracing to be filed with the Government copy of the diallusion file will be on untacked mapping sheets of suitable size and will be prepared each year.

3. The patwaris' copy of the diallusion tracing shall show the edge of the river as well as any new fields formed as the result of diallusion changes. The line representing the edge should be blue, and at both ends of it the year in which the measurements were made should be noted. The position of the edge will be fixed by measuring the remaining sides of the fields which are partly under the river and the position of the new fields with reference to the old fields out of which they have been formed, but if this method be not practicable, then the squares covering the affected part of the village will be reproduced from the base lines fixed by the Survey of India Department in those estates which were partly or entirely remeasured on the frame work laid down by the department, and off-sets taken from them. When the assessment has been made the fields assessed at the *odaa* rate will be marked off by lines of green dots around them. The dots will be run together into a continuous green line when the *kamil* rate has been imposed. The tracing to be attached to the Government copy of the diallusion file will reproduce only the changes of the particular year for which it has been prepared, but in order that there may remain no doubt as to the position of any new fields, the fields that touch them should also be shown.

4. The procedure for the correction of field maps will be applied without any modification to the portions of diallusion villages beyond the reach of river action, but as regards areas subject to such action, the procedure will be modified as follows:—

- (a) *Tatimma Shajras* will be prepared only for changes other than those due to diallusion. Changes due to diallusion will be shown from year to year in the diallusion tracings prescribed in rule 3.
- (b) At the end of every fourth year when a special attestation is carried out a fresh tracing of the portion of the village subject to river action will be prepared, and all new fields, whether formed in consequence of diallusion or other changes and whether shown in the old diallusion tracing or separate *tatimma shajras*, will be incorporated therein. This tracing will be prepared in duplicate, and one copy of it will be filed in the tabul with the *janabandi* and the other retained by the patwari for use during the next four years. Both copies will be duly attested by the *kanungo*. The preparation of a fresh tracing may be ordered even before the quadrennial attestation if the old tracing cannot continue to be used without producing confusion.
- (c) In the diallusion files new fields will be given temporary numbers, such as 40/1, 40/2, 40/3, &c., but all fields incorporated in the fresh tracing prepared under (b) will at the time of incorporation be renumbered in accordance with the system laid down in paragraph 41 and only entered in the field book prescribed in paragraph 42 of Standing Order No. 18. Fields shown in *tatimma shajras* will have been already numbered in accordance with the system.

5. It is not necessary that every new field should be given a new number. If a portion of a field is submerged and the ownership of that portion remains unaltered a new sub-number should not be given thereto as the soil entry will show all that is necessary. Again if any portions of an uncultivated plot are brought under cultivation, the use of sub-numbers should be avoided unless it is absolutely necessary for the purposes of *girdawari*. In a case like this, if sufficient space is not available on the page of the *khassra* on which the original number is entered, the necessary entries can be made at the end of the *khassra* and a brief note stating that this has been done made opposite the number in question. In writing a new *khassra* care should be taken to leave sufficient space for such entries as regards numbers containing large areas of cultivated land, portions of which are likely to be broken up from time to time.

6. As the measurements proceed the patwari will prepare form A, but the entries in columns 15 and 16 will remain in pencil till the *Tahsildar* has made his visit and formed his opinion as to the assessment. He will also make in the register of fields previously assessed below full rates (Form C) the necessary entries relating to crops grown in the past year.

7. The *kanungo* will satisfy himself that the patwari has included in his maps and *khassras* all land which should be included, will test the measurements, and check the *khassra*.

8. As soon as the khasra has been checked by the kanungo the patwari will prepare in duplicate in form D a village abstract of changes due to river action. He will make all the entries in columns 1 to 3, and also those giving the details of area and revenue for the previous year in ink. The entries showing deductions and additions and the area and revenue for the current year will be made in pencil.

9. The Tahsildar or Naib Tahsildar will test the map, &c., on the spot and pass orders as to classes of land, rates, and revenue after inspecting the fields and examining the entries in the khasra and in form C. He will cause to be entered in ink in the khasra the class and rate for each field as determined by himself. He will at the same time make the patwari enter in form C the rate against each field of which the class has been changed, and also all fields assessed for the first time below settlement at full rates. He will also have an extract from form C, showing those numbers only of which the assessment has been changed in the current year, put on the file. Form D will be completed by the patwari under the Tahsildar's directions. The Tahsildar will add a brief note to the file, explaining the changes which have occurred and his assessment proposals. He will then sign the map, khasra extract from form C, and abstract of area and revenue (form D) taking over the extract and the Government copies of the other papers. He will also sign the register (form C) which the patwari will retain in addition to his own copies of the other papers.

10. When the Revenue Officer who is empowered to pass final orders on the assessment disposes of the case, any corrections in the papers required will be made in the Government copies, and the patwari will be ordered to correct his own copies. He will also prepare in duplicate a khewat showing the result of the new assessment (form B) and forward both copies to the Tahsildar through the kanungo. The Tahsildar will see that the khewat agrees with the orders, and signing both copies will file one with the record and return the other to the patwari. The latter will embody the new figures in future bachh papers and will give free of charge a fard, showing the result to each khatedar concerned.

11. The whole file regarding changes of assessment due to river will be prepared on Lucknow paper stitched at the back in book form. The tracing of maps will be placed in an envelope of the full size of the file and will not be folded more than twice.

12. The district report on changes of assessment due to river will be prepared in Form F after obtaining the necessary figures from the tahsils in Form E.

13. Cases frequently occur in which remission of the current demand is required in consequence of destructive inundation, although no permanent injury has been done to the soil rendering a reduction of revenue needful. When making his inspection, the Tahsildar should report on all such cases including cases occurring in estate in which no measurements will be made in the current year. Report recommending such remissions should be made in form A or B appended to Standing Order No. 30.

PART C.

Assessment rules applicable to estates subject to the action of hill-torrents, including Tawi stream.

Land affected by hill-torrents shall be liable to enhancement or reduction of revenue under the following rules :—

1. Reduction shall be given, if by the action of hill-torrents (i) cultivated land becomes unculturable, and (ii) culturable land becomes deteriorated : provided that no reduction shall be given, unless the assessment of at least one estate is affected to the extent of not less than one rupee.
2. In the case of cultivated land becoming culturable the revenue assessed on such land shall be remitted. In the case of cultivated land becoming deteriorated the revenue assessed on such land may be reduced by one-half.
3. Enhancement shall be taken, when land previously unculturable, has been rendered culturable by the action of hill torrents, and has been brought under cultivation : provided that no enhancement shall be taken unless at least one holding in the estate shall have received benefit to the extent of one rupee.
4. When land previously unculturable, is brought under cultivation, it shall be assessed according to its quality, at either half rates or at full rates. The rates shall be the rates according to which the internal distribution of the revenue of the estate was made.
5. All lands assessed at half rates shall be liable to enhancement at the discretion of the assessing officer.

PART D.

Procedure for working the rules for assessment of land affected by hill-torrents, including the Tawi stream.

1. In the case of estates affected by a torrent, measurements will ordinarily only be made in the year when the quadrennial attestation of the estate takes place, provided that the Collector may order the lands in any estate to be measured and assessed in a year, other than that of a quadrennial attestation. If changes have occurred in the estate as a whole or in the individual holdings of sufficient importance to render this course desirable. Early in October the Tahsildar will send to the Collector a list of estates not coming under quadrennial attestation in which he proposes to make measurements explaining the grounds of his proposals. The Collector will return the list with his orders on it to the Tahsildar.

2. In dealing with cases of enhancement or remission of revenue, which may be necessitated under the above rule, the officers of Government shall adhere strictly to the village rates fixed at settlement, that is to say—

- (i) If the revenue has been distributed by shares or by an all round rate on cultivation, the all round rate on cultivation only shall be applied except that bad land may be assessed at half rates.
- (ii) If the revenue has been distributed by soil rates such rates only shall be applied but bad land may be assessed at half rates.
- (iii) Whatever land is assessed at half rates will be raised to full rates when the authorities think right.

3. The rules of procedure applicable to riverain villages along the Chenab and Jhelum are to be applied as far as possible. The duties of various officials will be as described therein, and the forms there prescribed will be used. The tracing of the old map in estates affected by hill torrents will be as accurate as the old map allows.



APPENDIX III.

The danger rate is not intended to be used automatically, but any village in which the danger rate is found, may be held to require consideration. In villages irrigated from the canal where the revenue is fixed, and there is a water advantage rate, the latter should be added to the demand of the harvest in calculating the incidence of the harvest, and water advantage rate on the fraction of the village area which the canal department profess to irrigate, i.e., 30 per cent. or 25 per cent. should be added to the fixed revenue, before calculating the normal rate. In villages under fluctuating assessment no rate need be worked out at all.

It should also be noted how suspensions and remissions should be worked: An automatic system is not possible and statistics must always be accompanied and interpreted by personal enquiry. Fortunately the western half of the district which in the past has required most suspensions will now be protected by the canal, and the whole of the Bar with the western part of the Hithar will be under fluctuating assessment. The part to be watched is that between the Grand Trunk Road and the canal, with the two circles receiving kharif irrigation, the Nahri of Gujrat and Hithar East of Phalia. The secure area is only likely to require attention in case of a general failure of rain such as occurred in 1907 and 1915. General suspensions will not ordinarily be required if the two previous harvests have been average or nearly so. Should the calamity extend to the succeeding harvest there will probably be need for general suspension, but its extent must depend on the particular conditions of each village, and the secure barani tracts will need relief almost as much as any other part of the district if two crops fail in succession. Suspensions are not so much wanted in the kharif, because the cultivator does not look to it so much to pay the revenue. If a village pays half the annual demand in the kharif while that harvest occupies less than 40 per cent. of the crops, and represents possibly 25 per cent. of the value of the year's crops its total failure would not normally justify the suspension of half the annual demand. But it is difficult to lay down a general rule, for instance in a year when the drought has led to such a lack of fodder, not only in the upland villages but in the Bar and in the riverain tracts, that special leniency is required. It is important to pass orders on suspensions and announce them to the villagers as early as possible, before they begin to borrow to meet the demand.

Arrears should not ordinarily be collected with the kharif but as far as possible with the first good rabi which has been successfully reaped up to the limit of double the demand.

List of insecure villages:

Tahsil.	Circle.	Assessment Circle No.	Name of village.
Gujrat	Hithar	6	Jafapur.
		7	Santpura.
		8	Kot Macjdia.
		9	Kot Nathu.
		10	Sipawat.
		11	Kot Kutabdia.
		12	Gobindpura.
		13	Bazgarh.
		70	Mahlu.
		71	Khokar.
	Jatatar	78	Jhandewala.
		79	Chak Sero.
		80	Chak Pindi.
		81	Gorsi.
		82	Majra.
		83	Giddian.
		84	Thakar Lohar.

List of insecure villages—continued.

Tahsil.	Circle.	Assessment Circle No.	Name of village.
Gujrat—concluded ...	Jatatar—concluded ...	85	Sohal.
		86	Mahmud Chimna.
		87	Char.
		88	Bura Bant.
		89	Dali Bant.
		90	Sadhoke.
	Nahri ...	1	Thatta Paur
		4	Sumnan Pindi
		5	Chak Kazi.
Kherian ...	Pabbi ...	57	Choha.
		58	Godi Gohra.
		59	Chak Jani.
		60	Thun.
		61	Dhangrot.
		62	Simli.
		63	Bhowanjh.
		64	Sardhok.
		84	Chak Muhammad.
		85	Kotla.
		86	Mohri.
		87	Kalas.
		88	Kolian Habib.
		89	Dhon.
		90	Biddo.
		91	Rai Chand.
		92	Dhok Gujran.
		93	Din, a Khurd.
	Gojar	1	Chikori.
		2	Dhal.
		30	Sagar Dhariwal.
		31	Ranian.
		32	Chechian.
		33	Jaura.
		65	Jhanda.
		66	Mainowal.
		79	Chimbar.
		80	Raudbir.
			(The above have a large part of their area outside the canal boundary.)

List of insecure villages—continued.

Tahsil.	Circle.	Assessment Circle No.	Name of village.
Kharian—continued ..	Maira	178	Kotla Bhalot.
		179	Marala.
		213	Said Abraham.
		214	Chak Sarwani.
		215	Budhu Kalas.
		220	Chak Sikandar.
		221	Dala.
		223	Kalanwala.
		224	Fatehgarh.
		225	Murali.
		226	Ghika.
		227	Pindi Rampar.
		228	Dumian.
		229	Mundhir.
		230	Sadwal.
		231	Santpura.
		232	Dhoria.
		233	Chak Sikandar.
		234	Bajeran.
		235	Burianwali.
		236	Dhar.
		237	Hakla.
		238	Hail.
		239	Ganja.
		240	Chak Khalas.
		241	Mughli.
		242	Chak Rajadi.
		243	Jatria Kakan.
		244	Jatria Khurd.
		245	Chak Dina.
		246	Chatta.
		247	Shah Earmast.
		248	Sukh Chaina.
		249	Chor Chikori.
		250	Kotla Kasim Khan.
		251	Jalal Din.
		252	Kotla Sarang Khan.
		253	Thurgalla.
		254	Chanun Bhoja.
		255	Paswal.
		256	Mundir.

List of insecure villages—continued.

Tahsil.	Circle.	Assessment Circle No.	Name of village.
Kharian—continued ...	Maira—continued ...	257	Dhinda.
		260	Chohan Kalan.
		261	Chohan Khurd.
		262	Kotli Shahjehani
		263	Saprai.
		264	Chhokar.
		265	Dullanwala.
		266	Hirapur.
		267	Gajju.
		268	Bhalot Rasso.
		269	Bhalot Shera.
		270	Bhalot Makhdum
		271	Haji Muhammad.
		272	Phola.
		273	Bhola.
		274	Chak Umar.
		275	Pal.
		276	Babarian.
		277	Lambhor.
		278	Karnana.
		279	Rakh Dand.
		280	Chak Miana.
		281	Ghurku.
		282	Bankalas.
		283	Dhola.
		284	Bashana.
		285	Sadharian.
		286	Chak Haji.
		287	Lukman.
		288	Aujarian.
		289	Khupan.
		290	Nunanwali.
		291	Bhago.
		292	Chak Miana.
		293	Barnali.
		294	Basrian.
		295	Dhuni.
		296	Bhakua Gors.
		297	Uttam.
		298	Didhar.
		299	Awana.

List of insecure villages—concluded.

Tahsil.	Circle.	Assessment Circle No.	Name of village.
Kbarian—concluded ...	Matra—concluded ...	300	Sheikhs Tahir
		301	Mirza Tahir
		302	Wassan.
		303	Tibbi Rao.
		304	Chikori.
		305	Malwana.
		306	Lungo.
		307	Tibbi Alias.
		308	Handu.
		309	Nagrian.
		310	Chak Miana.
		311	Tibbi Hassan Karim.
		312	Thalla.
		38	Sahnianwala.
		39	Bhagat.
		43	Dhabula.
		63	Burj Ghanian.
		64	Thatti Murid.
		81	Chak Kamal.
		82	Ratto.
		103	Alhan.
		104	Kadirabad.
		105	Chook Kalan.
		106	Channi Mughlan.
Phalia ...	Hithar East, formerly Bet Chenab.	108	Jago Kalan.
		109	Tunpur.
		110	Gudgor.
		111	Thatta Khan Muhammad.
		112	Thatta Gilgoian.
		113	Thatta Hakimwala.
		114	Kala Shadian.
		115	Bahri.
		116	Randiali.
		117	Murid.
		118	Bahu.
		119	Manga.
		120	Kotla Bhola.
		121	Agroia.
		122	Sarang.
		123	Sahanpal.
		124	Channi Sahnpal.
		125	Ranmal.
		126	Thatta Alia.
		127	Thatta Neka.
		128	Channi Sahram.

APPENDIX IV.

GLOSSARY OF VERNACULAR TERMS USED IN THE FINAL SETTLEMENT
REPORT (OTHER THAN THOSE EXPLAINED IN THE TEXT).

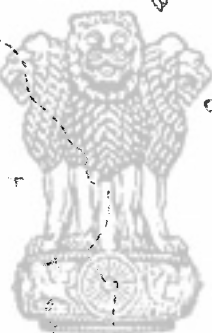
Vernacular.	English.
Abzna ...	That portion of land revenue due to irrigation.
Bajra ...	Buhrush millet.
Banjar ...	Fallow land.
Barani ...	Land dependent on rainfall.
Batta number ...	Fractional number.
Chahi ...	Irrigated by wells.
Chaudhri...	A headman.
Chhamb ...	Lowlying land in a depression.
Girdawari ...	Inspection of records of crops at each harvest.
Ghi ...	Clarified butter.
Inam ...	An allowance or pension.
Jagir ...	An assignment of land revenue.
Jamabandi ...	A revenue record.
Jawar ...	Great millet (<i>sorghum vulgare</i>).
Kacha ...	Subject to river action.
Kanal ...	A measure of area $\frac{1}{8}$ th part of an acre.
Kanungo ...	A revenue officer over the patwari.
Kuram ...	A local measure of length ($5\frac{1}{2}$ feet).
Karu kan ...	A figure marked on a map to denote distance.
Kharif ...	The autumn harvest.
Khasra girdawari ...	A register of fields used in harvest inspections.
Khatauni ...	A holding slip.
Killabandi ...	A method of measuring fields into exact squares or rectangles at each corner of which is a peg (killa). The rectangle is an exact acre.
Lakh ...	One hundred thousand.
Lumberdar ...	A village headman.
Lumberdari ...	Pertaining to a lumberdar (village headman) ; village headmanship.
Maria ...	A measure of area $\frac{1}{160}$ th of an acre.

Vernacular.	English.
Masavi ...	A mapping sheet.
Mash ...	A pulse.
Massar ...	A lentil.
Maund ...	A measure of weight 40 seers, 82½ lbs. commonly reckoned as 80 lbs.
Min number	Number included in another.
Moth ...	A pulse.
Mung ...	A pulse.
Nahri ...	Watered by canal.
Nakka ...	The old high bank of the river.
Nishandehi	Demarcation of boundaries of fields.
Patwari ...	The village accountant.
Rabi ...	The spring harvest.
Rivaj-i-'Am	Tribal custom.
San ...	Hemp.
Sarshaf ...	Rape (<i>Brassica campestris</i>).
Shajra Nasab	Genealogical tree.
Shamilat...	Village common land.
Shisham ...	A tree.
Tahsil ...	Revenue sub-division of a district.
Taramira ...	An oilseed.
Til ...	An oilseed.
Toria ...	An oilseed.
Zail ...	Area (block of villages) under the jurisdiction of a Zaildar.
Zaildar ...	A rural notable appointed by Government. His position is partly official, partly that of a representative of the people. He receives remuneration from Government.
Zamindar	An agriculturist.
Zamindari	A form of tenure of estates possessed in full proprietary rights by a single owner.
Zamindari Inam	An allowance to a man appointed as a helper to the Zaildar.

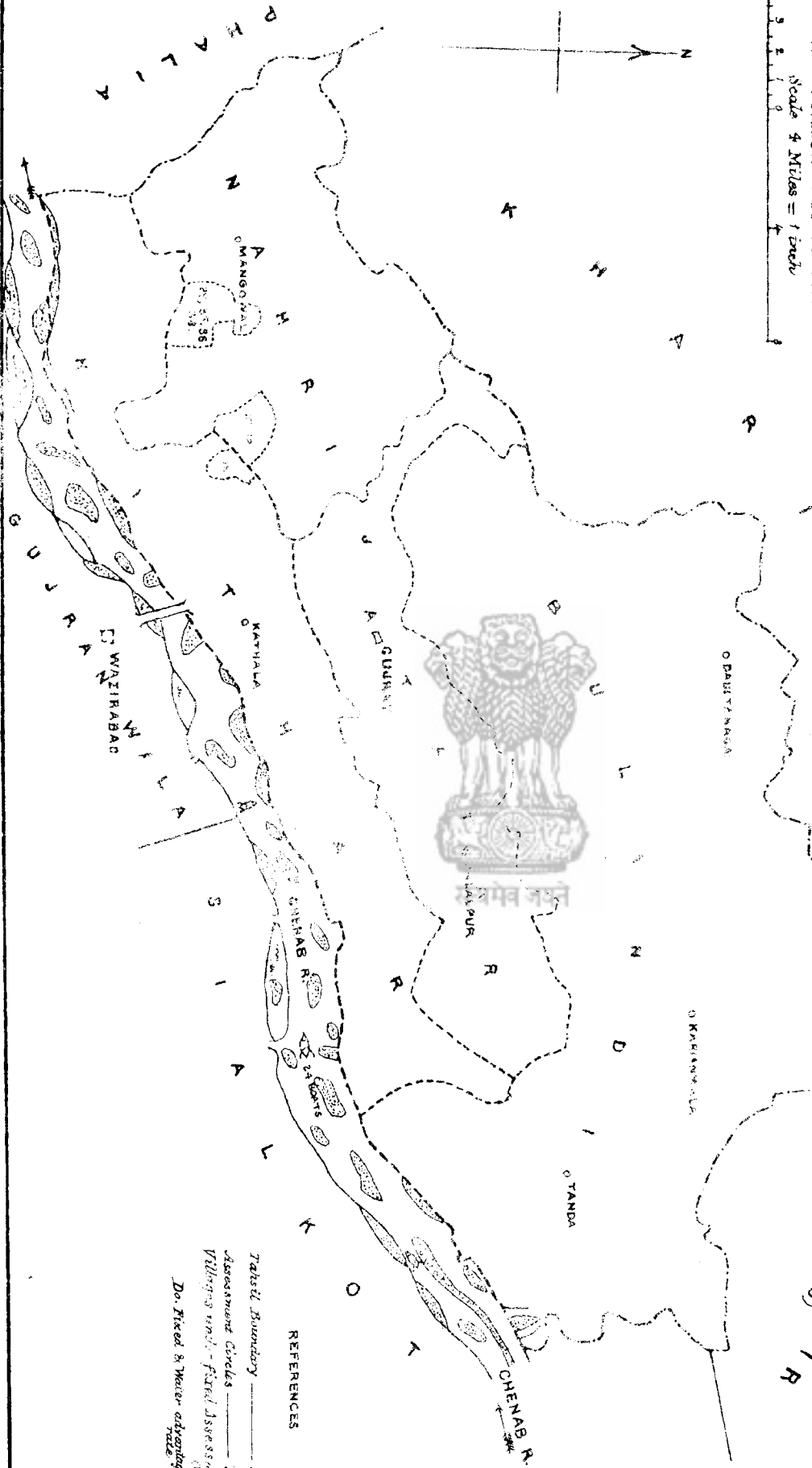
MAP OF GUJRAT TAHSIL

SHOWING ASSESSMENT CIRCLES
AND FORMS OF ASSESSMENT

Scale 4 Miles = 1 inch



KASHMIR
(UAMM)



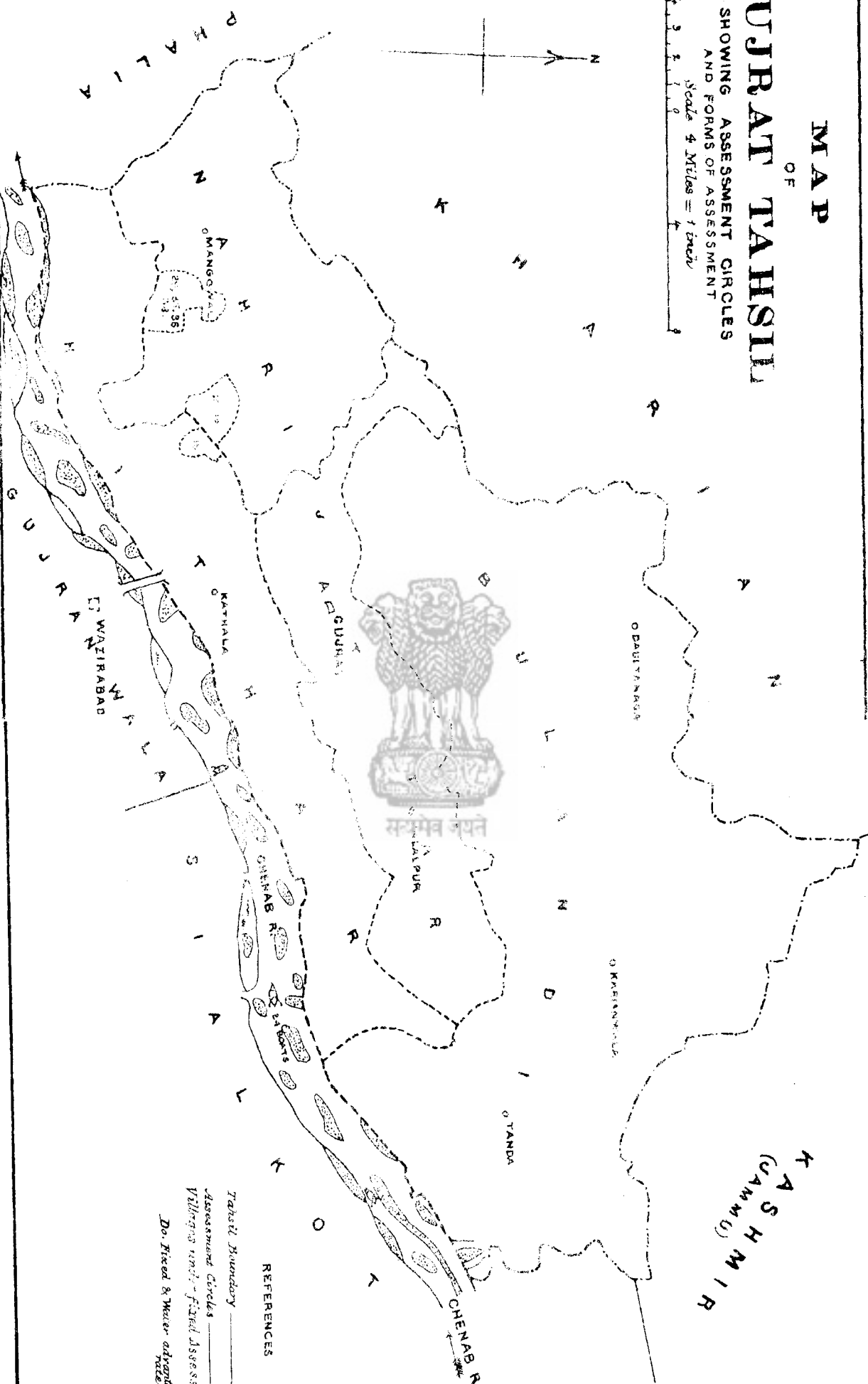
REFERENCES

- Tahsil Boundary ————
- Assessment Circles ————
- Villages under Field Assessment (Green circles)
- Do. Fixed & Water advantages (Yellow circles)

MAP OF GUJRAT TAHSIL

SHOWING ASSESSMENT CIRCLES
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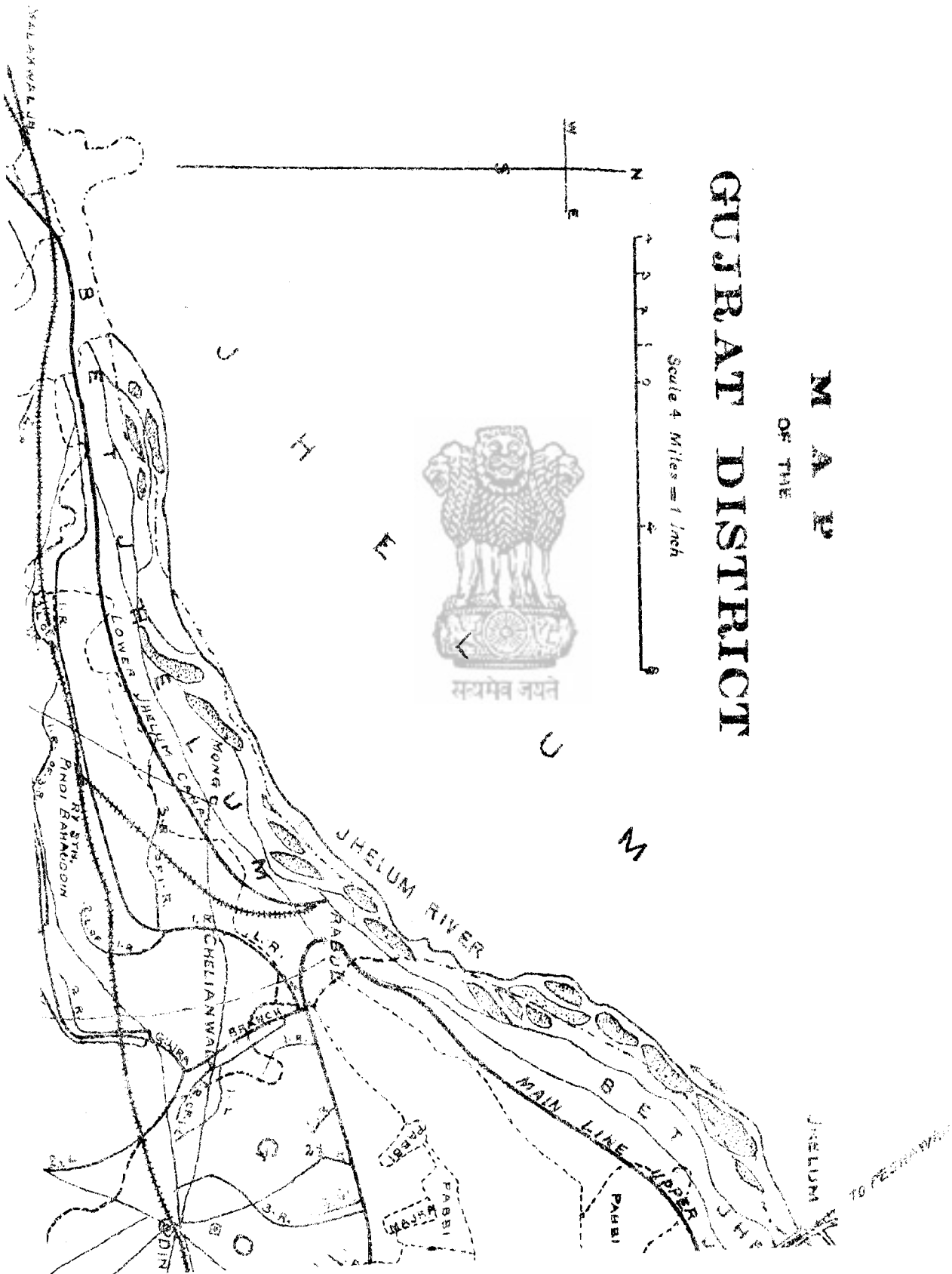
MAP OF THE

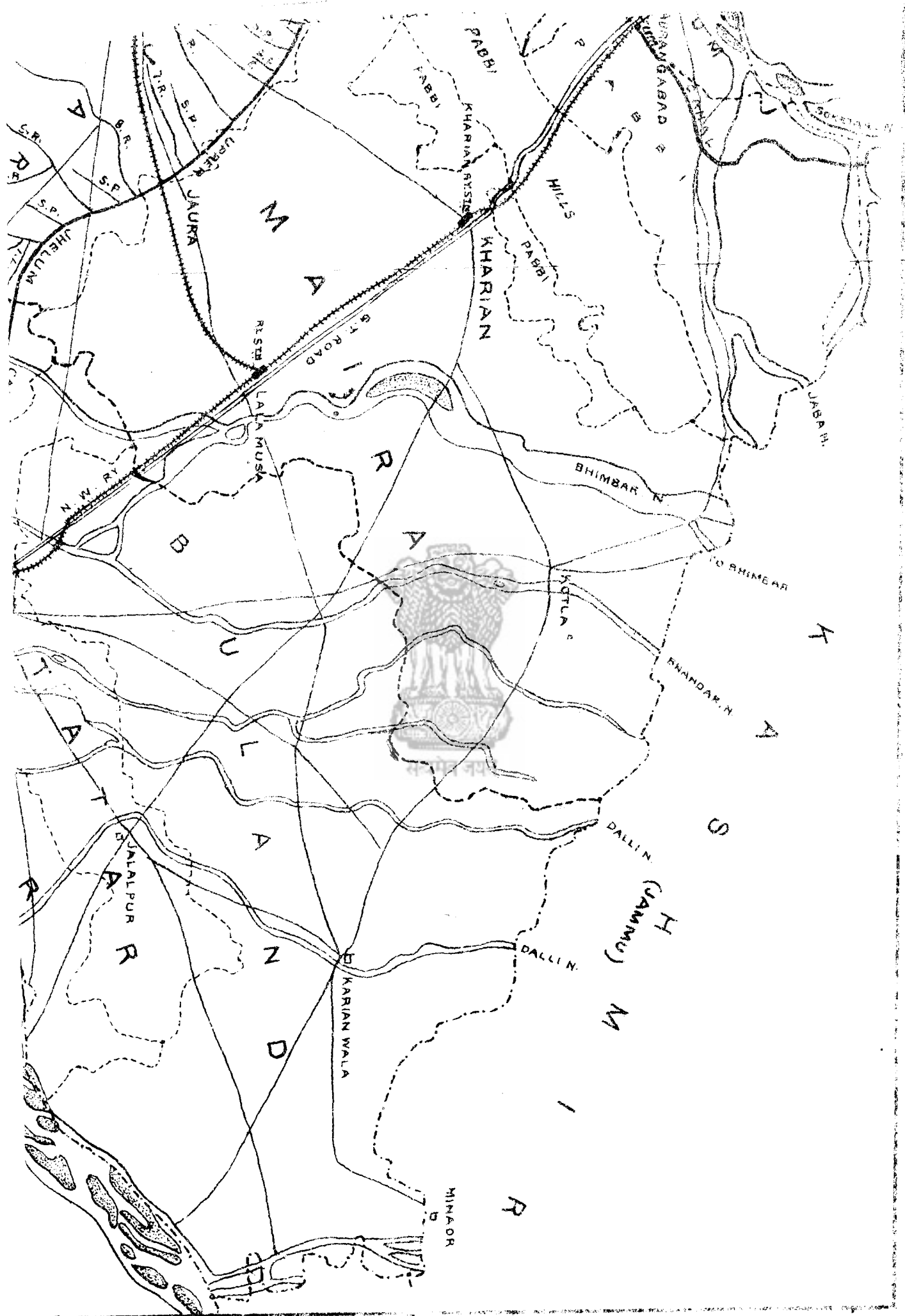
GUJRAT DISTRICT

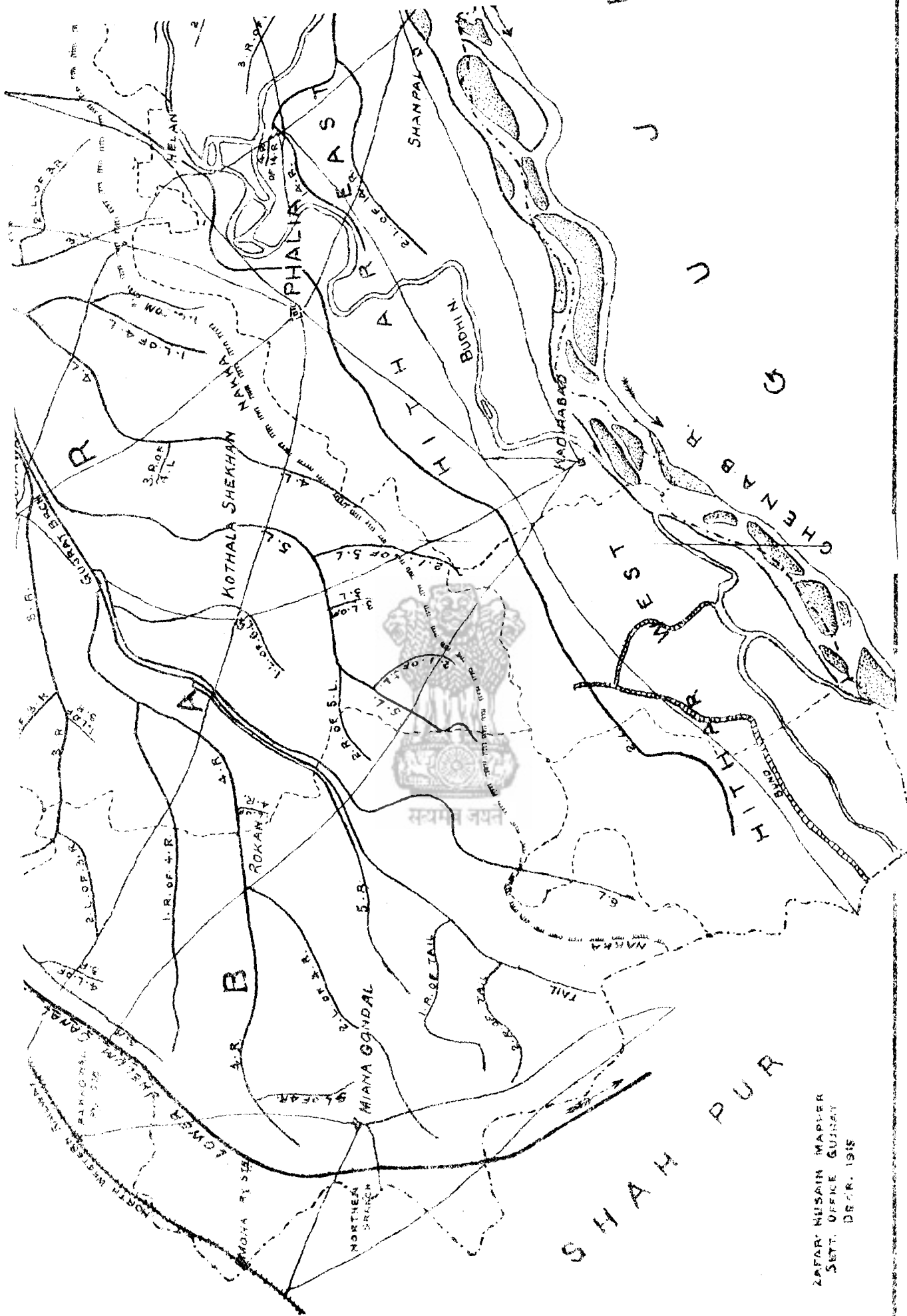
Scale 4 Miles = 1 inch



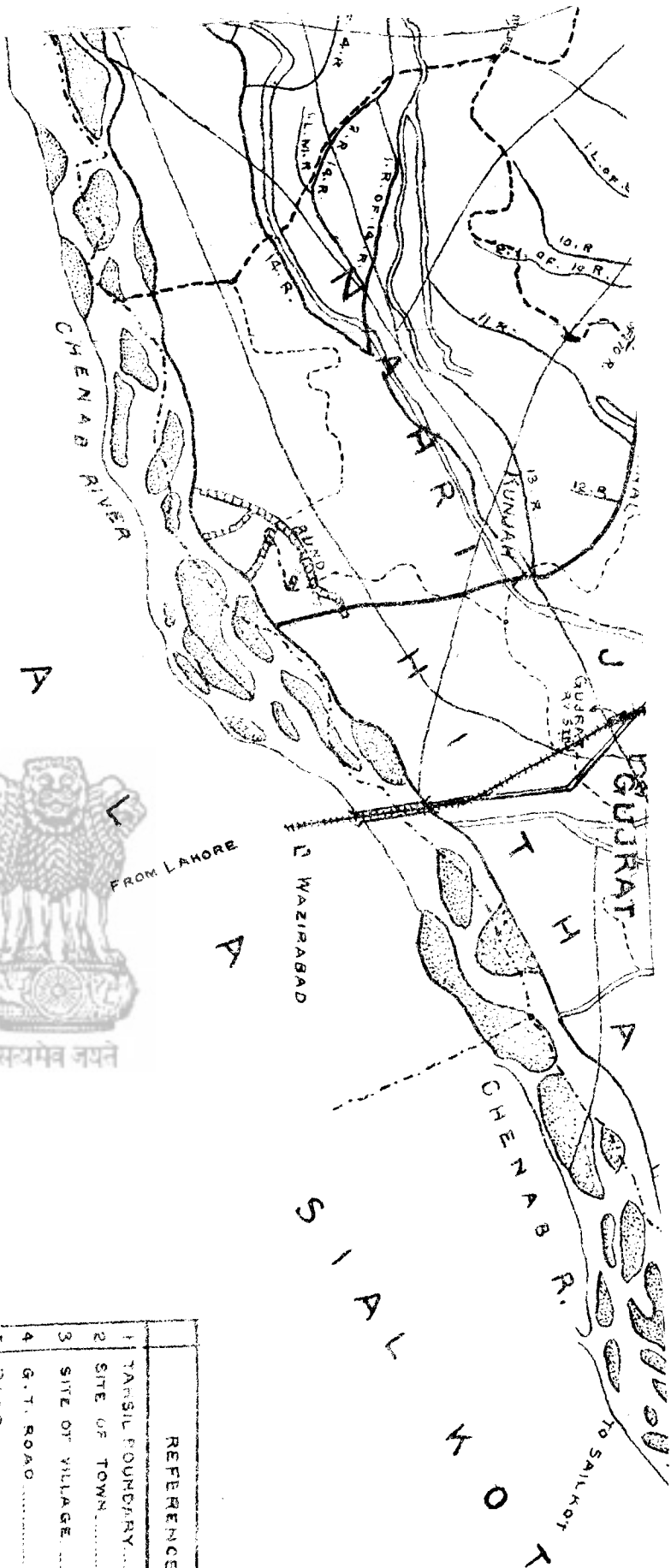
सत्यमेव जयते







ZAFAR NUSAIN MAPLER
SETT. OFFICE GUJANAT
DEC. 1918



REFERENCES	
1 TANGIL POUNDARY	—
2 SITE OF TOWN	—
3 SITE OF VILLAGE	—
4 G.T. ROAD	—
5 ROAD	—
6 RAILWAY LINE	—
7 CANAL	—
8 NALA	—
9 BUND	—
10 RIVER	—
11 DISTRICT BOUNDARY	—
12 ASSESSMENT CIRCLE	—
13 NAME	—

H.S. WILKINSON
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GUJRAT DIST.